THE CULTIVATOR.

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

MONTHLY NOTICES.

☞ COMMUNICATIONS have been received during the past month from M. S., D. W. Brodnax, R. A. Avery, Kentuck, John Lewis, G. Cook, Commentator, J. J. Reed, C. H. Tomlinson, Za. Drummond, Sanford Howard, D. B. C., C. N. Bement, D. G. M., A. C. Stevenson, N. B. Cloud, Quercus, D. S. Curtis, H. D. E., S. W. Jewett, D. K. Minor, Sarah, J. Wells, and Q. E. D.

OUR thanks are due to the editors of the *New Farmers' Journal*, London, for the continued files of that valuable paper—to S. H. HUNTINGTON, Esq. and Dr. D. W. GRANT, for copies of the "Transactions of the Hartford Co. Ag. Society for 1842," including the annual Address of Mr. Huntington, Reports of Committees, &c., making a most valuable pamphlet of over 90 pages, some extracts from which we shall give hereafter—to S. W. JEWETT, Esq. Weybridge, (Vt.) for a portrait of one of his fine Paular Merino Bucks, painted by Saxe, which makes a valuable addition to our Gallery of Portraits of Domestic Animals—to Col. AMOS SAWYER, Rochester, for a cock and half a dozen hens of the pure Poland breed. They arrived here safely, and are beautiful birds.

☞ "RICHMOND'S" letter to Solon Robinson, and several other articles intended for this number, are necessarily deferred till next month.

LONG ARTICLES.—We have given a greater number of long articles this month than usual; but they are of such interest that we doubt not our readers will wish rather that there were more, than less of them. The very pertinent and able Address of Mr. WADSWORTH—the interesting Lecture of Dr. PLAYFAIR, now first published in this country—the valuable Essay of Mr. THOMAS—the details of Dr. CLOUD'S Experiments, and our friend ROBINSON'S Hints to Western Emigrants, will, we are confident, induce no regret at their length; for either of them are worth a year's subscription.

HARD TIMES.—A correspondent at Brownsville, Pa., says:—"I have paid your agent for the Cultivator for 1843. He informed me that several had discontinued in consequence of the scarcity of money. To remedy in some degree the withdrawal, I set to work and obtained *four* new subscribers, the money for which I enclose herein; and I wish most sincerely, the Cultivator could be placed in the hands of every farmer in our state. I have it from the commencement, and have derived great advantage from it."

A subscriber at Huntington, L. I., fearing also that "the times" would affect the circulation of the Cultivator injuriously, determined to do what he could conveniently, to make up for losses thus sustained. He says: "I have obtained nine or ten subscribers, and have not been out of my business way. This will show how easily subscribers may be obtained, if our Agricultural friends will make a little exertion. On my way home from the post office with the Cultivator, I got three subscribers." We tender our thanks to these good friends, and hope many of our readers will be induced, from the same consideration, to follow their example. The "hard times," according to present appearances, are likely very seriously to affect the Cutivator the present year, unless those who appreciate its value will make an extra effort in its behalf.

CAPONISING TURKEYS.—"M. S." of Orange county, asks if the operation described by Mr. Keeler, (Dec. No. 1842,) can be performed with like beneficial effects on the turkey? Can Mr. K. answer the question.

CULTURE OF COTTON—We have the pleasure of presenting our southern readers this month, the promised article of DR. CLOUD, on his improved method of cultivating Cotton. It will be seen that there is nothing extraordinary or mysterious in the process. His increased crop has been obtained by the same process which has enabled so many of our northern farmers to increase their corn and many other crops, two, three and four fold—by *the judicious selection of seed, the application of manure*, and *thorough tillage*. We know little of the culture of cotton, but if the practice is no better than that pursued by a correspondent of the So. Temp. Advocate, in the culture of corn, who maintains that 29 bushels per acre is a great crop, we can see no reason why the crop may not be doubled, or even quadrupled by an improved system, under which the land, while it gives this increase of crop, is constantly improving, instead of deteriorating as it does under the old system. That Dr. Cloud's practice will answer equally well on all soils and in all sections of the cotton-growing region, or that even on the same soil he will at all times be as successful as he was the past year, is hardly to be expected; but that his experiments, and the attention which will be excited to the subject by their results, (5,989 lbs. per acre,) will be the means of effecting a decided advance in the culture of cotton, we cannot doubt. We beg Dr. C. to accept our thanks both for his communications and for the interest he has been pleased to take in the circulation of the Cultivator in Alabama. On this subject he says:—"Several of my friends are rather opposed to my communicating to the Cultivator the result of my experiments, as they are fearful it is not sufficiently circulated in the southern or planting region. I say to them, however, that this is one of my principal objects in sending my communications to the Cultivator, that I may thereby give my little mite toward accomplishing the first wish of my heart in temporal matters, which is to see the Cultivator read by every southern cotton planter." In answer to his question as to the extent of the circulation of the Cultivator in the cotton region, we think we may safely say that for the last two years its circulation in that section of the country has exceeded that of any other single agricultural paper of the country. What its circulation will be this year, will of course depend on the exertions of our friends in that quarter to procure subscribers.

"CREDIT."—Scarcely a day passes without our seeing in some of our exchange papers, articles copied from the Cultivator, without any acknowledgment of the source from whence they were derived. This is not right; and if it arises from carelessness, as we presume it generally does, we would remind those who copy so liberally without credit, that they do the Cultivator great injustice by their negligence. The *Hudson Gazette* of Jan. 24, failed to give us credit for the excellent paper of our correspondent, J. J. T. on Garden Vegetables. The article headed "Mr. Webster's Farm," in the *Poughkeepsie Telegraph* of Jan. 25, should have been credited to the Cultivator—also the *three* articles in the Agricultural department of the *Peterboro Chronicle* of Jan. 10.

BUTTER AND CHEESE.—Our correspondent, D. B. C. of Canaan, N. Y. informs us that during the past season he milked ten cows, and a part of the time eleven, and that he made 1006 lbs. of butter, and 1,300 lbs. of cheese, after having supplied his family of eight persons with milk, and raised seven calves. The other facts mentioned by D. B. C. are interesting, and we shall endeavor to make room for them hereafter.

POSTAGE.—The most onerous tax to which the people of this country are subject, is that of postage. It is unequal and unjust in every point of view; and is a grievance which ought to be remedied at once. Our correspondent, S. W. JEWETT, Esq. of Vermont, in a communication just received, and for which we have not room this month, suggests "that if one half, or even one-tenth of the subscribers of the Cultivator would address their representatives in Congress on the subject, a reduction would be effected." We fear, however, that individual complaints will accomplish but little, for these have been made for years without effect. Public meetings should be held generally throughout the country to remonstrate against the tax, and to petition for a reduction. Until this is done, or we have a post-master general of enlarged and liberal views, who has some higher object than to show how much money he can screw out of the people by the most illiberal construction of the post office laws, we shall have little hope of a favorable change.

HORTICULTURAL SCYTHE.—A very pretty article of this kind, manufactured we believe at the request of our friend WALSH of Lansingburgh, has been shown us. It is about 20 inches long, and is admirably adapted for the use of lawns, where it is wished to cut the grass around trees, shrubbery, &c. It is manufactured by Mr. McNamara of Hoosick.

SILLIMAN'S JOURNAL.—The January No. of this work is an unusually interesting one. It contains twenty articles, with several illustrations, from the ablest men of our country, besides the usual Bibliographical and Miscellaneous notices. The proprietors state that its "subscription list has suffered severe losses by the general commercial pressure," and they call upon its friends to do something to make these losses good. There is no work published in our country which reflects so much honor on it, both at home and abroad, as this; and we hope the friends of science will give a prompt response to the call upon them to aid by their efforts its subscription list. For $6 the work will be sent free of postage for one year. It will give us pleasure to forward the names and money of any of our friends, who may wish to become subscribers; though a better way would be to hand the $6 to some post-master, to be forwarded directly to Prof. SILLIMAN, New-Haven, Ct.

THE MAGAZINE OF HORTICULTURE.—This valuable work entered on its 9th vol. with the present year. The January number opens with an interesting "Retrospective View of the Progress of Horticulture in the United States, during the year 1842." This is followed by "Notes on England and France," by WM. KENRICK, author of the New American Orchardist, who returned last season from a professional tour in those countries, which, could we make room for it, we should be glad to transfer to our pages. This Magaine, we regret to learn, is not as liberally patronized as it ought to be; and we hope such of our friends as are in want of a work of this kind, will at at once forward their names with $3, the annual price, to C. M. Hovey & Co. publishers, Boston.

LARD OIL.—We are pleased to learn that two establishments for the manufacture of Lard Oil and Stearine Candles, have recently been put into operation at Rochester—one owned by Messrs. SAWYER & PERRIN, and the other by Mr. DYER. These establishments will afford a market for a considerable portion of the surplus pork of that region, and thus materially aid the interests of the farmer.

CORN STALK FODDER.—Extract of a letter from "P. P." Pittsburgh, Pa., to the Cultivator:—"I last spring sowed one acre of corn, and find it a most excellent feed for milch cows; in fact, I consider it the best feed we can give them, together with pasture. I cut and fed it green; I had two crops on the same ground. From the little experience I have had, I would say the ground requires to be good, and as free from weeds as possible. The first crop, in our section of the country, should be sown as early in the spring as the weather will permit; the second crop not later than the first of July, to insure a full crop, and time to feed green. The second crop will outgrow the weeds."

A letter from M. P., New-York, says:—"I last year sowed about two acres of corn broadcast. Though I neither measured or weighed the crop, it was so abundant and profitable as green and dry fodder, that I intend doing the same while I have a farm."

BEE HIVES.—Mr. John Forman of Onondaga Hollow, recently exhibited at our office, a model of "the ultimatum yearly renovating miller-destroying bee hive, with a house calculated to facilitate the operations of the hive." From its appearance and the explanations given by Mr. F. we are inclined to think it a useful invention. Any communication addressed to him post paid, at the above place, or to New-York city, will receive attention.

MADDER.—One of our friends wishes to make an experiment in the culture of Madder the ensuing spring, and will be glad to learn through the Cultivator where the roots can be obtained. In answer to the inquiry of the AMERICAN FARMER, on this subject, we have to state that Madder was some years since grown to a small extent, by several farmers in the counties of Otsego and Madison, in this state. We should be glad to learn whether its cultivation has been continued, and if so, whether it has been found profitable. The experience already gained may save others the expense of a trial, or may lead others to engage in it if it has been successful. The editor of the American Farmer will find the information he wishes in the early vols. of the Cultivator.

TO KILL LICE ON ANIMALS.—A writer in the Central N. Y. Farmer, says:—"Take the water in which potatoes have been boiled, and rub it over the skin. The lice will be dead within two hours, and never will multiply again. I have used ten kinds of the strongest poison to kill lice, all with effect, but none so perfect as this."

ANNUAL MEETING OF THE N. Y. S. AG. SOCIETY.

THE annual meeting of the New-York State Ag. Society was held in this city, on the 18th of January. The Society convened at 9 o'clock, A. M. in the Lecture Room of the Young Men's Association, the President in the chair. Gentlemen were in attendance from the counties of Albany, Cayuga, Columbia, Greene, Jefferson, Livingston, Lewis, Monroe, Montgomery, Madison, Otsego, Oneida, Orange, Oswego, Queens, Rensselaer, Schenectady, Steuben, Saratoga, Tompkins and Wayne.

The Report of the award of Premiums on Field Crops, &c. was read by the Secretary, Mr. TUCKER, as follows:

At the regular meeting of the Executive Committee, on the second Wednesday of January, 1843, the several statements of the competitors for the premiums on Field Crops, Essays, Paintings, Engravings, and Designs for Farm Buildings, were referred to appropriate committees, upon whose reports the following premiums are awarded:

ON FIELD CROPS.*

ON INDIAN CORN.—First Premium to *Samuel Phelps* of Ira, Cayuga county. 122 bushels per acre—$15.

Second, to *Wm. Ingells* of Volney, Oswego county. 89 bushels per acre—$10.

Third, to *Joseph F. Osborn* of Port Byron. $5.

Fourth, to *Anthony Van Bergen* of Coxsackie, Greene county. 85 bushels 51 lbs. per acre—Diploma.

ON BARLEY.—First Premium to *Nathaniel S. Wright* of Vernon, Oneida county. 53 bushels per acre—$10.

Second, to *T. I. Vandevecr* of Amstertlam, Montgomery county. 40¼ bushels per acre—$5.

ON RYE.—First Premium to *Israel F. Goodwin* of Westmoreland, Oneida county. 32 bushels and 36 lbs. per acre—$10.

Second, to *T. I. Vandevecr*, Amsterdam. 28 bushels, 29 quarts per acre—$5.

ON OATS.—First Premium to *Samuel Phelps*, Ira, Cayuga county. 102 bushels per acre—$10.

Second, to *Wm. A. Russell*, Salem, Washington county. 97 bushels per acre—$5.

Diploma, to *Israel F. Goodwin*, Westmoreland. 81 bushels per acre.

The Committee also recommend a special Premmiu of $10, to *Geo. Sheffer* of Wheatland, Monroe county, for his crop of oats of 87¼ bushels, from 9½ acres of land, being an average of 91⅔ bushels per acre.

ON PEAS.—First Premium to *George White*, Rutland, Jefferson county. 33⅓ bushels per acre—$10.

ON POTATOES.—First Premium, to *George White*, Rutland, Jefferson county. 1 acre, 1 8-10 rods—421⅔ bushels Pinkeyes—$10.

Second, to *George Sheffer*, Wheatland. 400 bushels per acre—$5.

RUTA BAGAS.—First Premium to *John McConnel*, Canandaigua. 855½ bushels per acre—$10.

ON BEETS.—The First Premium for beets, to *George Sheffer*, Wheatland. 1 acre, 12 rods—1026⅔ bushels—$10.

ON CARROTS.—First Premium to *Wm. Risley*, Fredonia, Chautauque county. 985½ bushels per acre—$10.

ON ESSAYS, &c.

There were no competitors for the Premiums offered for Essays on Agricultural Chemistry, on Rotation of Crops, and on the introduction of New Agricultural Products.

For the Premium for the best Essay on the General Management of the Farm, four Essays were presented. The premium was awarded to *Willis Gaylord* of Otisco, Onondaga county—$20.

But two Essays were offered for the Premium on the Management and Application of Manures. The Premium was awarded to *Willis Gaylord* of Otisco—$20.

DESIGNS.—For the Premium on the best plan of a Farm House, Barn, and necessary out-buildings, three plans were presented. The Gold Medal was awarded to *John J. Thomas* of Macedon, Wayne county; and a Silver Medal to *D. G. Mitchell*, Salem, Conn., for the second best.

PAINTINGS.—The Committee to whom were referred the several Paintings offered for the Gold Medal of the Society, for the best specimen of Paintings of Domestic Animals, recommended that medals of equal value be given to *Woodside* of Philadelphia, and *Van Zandt* of Albany.

The Silver Medal for the best specimen of Floral Painting, was awarded to *E. Whitfield*, Albany.

ENGRAVINGS.—The Gold Medal, for the best engraved portrait on wood, of Domestic Animals, was awarded to *J. W. Orr* of this city.

The following letter from the Corresponding Secretary of the Society, was then read:

Cortland Village, Jan. 13, 1843.

JAMES WADSWORTH, Esq. Pres't N. Y. S Ag. Society:

SIR—Owing to official business of importance, and which does not admit of having the time for attending to it changed, I find it impossible to be present at the annual meeting of the Society. To one who has made it a point, except when unavoidably detained, to attend those meetings, for a long series of years, I need not say that in the present condition of the Society, and with the interest which our annual meetings at present possess, the disappointment is severe.

I am unable at this time, to forward my annual report as Cor. Sec'y of the Society, from the fact that a considerable portion of the communications from our own state, designed for the Society, have not yet been received, and will be forwarded by individuals attending the annual meeting. A brief abstract of my proceedings however, for the past year, may not be without interest to yourself and the Society.

Acting under the instructions of the Board, I have made an effort to elicit information of value to our Society, from various sources, domestic and foreign. Out of about five hundred official letters written by me during the past year, about three hundred have been despatched to eminent agriculturists of this and other countries, to ascertain those important facts and principles in husbandry, which advancing experience, and scientific experiment, are continually developing and establishing.

Many communications of value, have been received in answer to my inquiries, from this and other states.

Communications have been received from France, England, Scotland and Ireland, and I have reason to think that others are now on their passage.

I have opened a correspondence with the U. S. Minister to Spain, by which I hope to be able to ascertain many facts of value, in relation to that unfortunate but interesting country, as well as the adjoining kingdom of Portugal.

I regret to say, that owing to the difficulty I experienced in obtaining the address of several eminent agriculturists in Germany, I was not enabled to address them in time to hope for an answer, prior to the present meeting. I therefore concluded to defer it, but it is my earnest hope that this important field of inquiry may be diligently and successfully explored by the corresponding officer of the Society for the ensuing year.

I have addressed communications to sources, supposed to be the proper ones, in South America, and the West India Islands, in relation to the cultivation and acclimation of certain plants, the successful culture of which would be a great desideratum to this and other states. My inquiries have not reached their destination, or have failed to secure the attention of those to whom they were directed, as no replies have been received to them.

I have the honor to be, respectfully, your ob't serv't.

HENRY S. RANDALL, *Cor. Sec'y.*

The Report of the Treasurer, E. P. PRENTICE, Esq. was then read. The receipts and disbursements of the Society for the last year, were as follows:

Balance on hand, Jan. 19, 1842, ...	969.36
Receipts during the year, ...	2,349.92
	$3,319.28
Payments for Premiums and expenses, .	1,475.36
	$1,843.92

The Treasurer estimates the sum now due by the Society for Premiums, &c. at about $450, leaving a balance of about $1400 in the treasury, after the payment of all demands against it.

On motion of Mr. COLMAN,

Resolved, That the Executive Committee, in the distribution of Premiums, be instructed, as far as they may deem it suitable, to give Dana's "Muck Manual," or Ruffin's "Essay on Calcareous Manures," as premiums, deeming the two works highly instructive, able, and useful, and a substantial benefaction to the Agricultural interest.

It having been intimated to the Society, that a room might be obtained for an Agricultural Museum, in the state building, in connection with the Geological Museum, it was, after a statement on the subject from Prof. EMMONS, resolved, that a committee be appointed to visit the rooms and confer with the State Geologists on the subject. Committee: Messrs. Nott, Prentice, and Sherwood.

On motion of Mr. ROTCH,

Resolved, That the Executive Committee be requested to call a meeting of breeders, at such time and place as they may deem proper, for the purpose of discussing the different points of merit in domestic animals, with a view of arriving at some definite opinion as to the points most desirable to be attained in breeding.

The PRESIDENT of the Society, after stating that Mr. Colman, late Agricultural Commissioner of Massachusetts, had, at the suggestion of many distinguished friends of Agriculture, proposed a tour throughout Europe, for the purpose of obtaining exact and full information of the Agriculture of Europe, and of the condition of Agricultural Schools and Experimental Farms, offered the following resolutions, which were adopted unanimously:

Resolved, That the New-York State Agricultural Society regard with great interest, the proposition of HENRY COLMAN, Esq. to make an Agricultural Tour through some of the most highly cultivated portions of Europe, and anticipate from this distinguished writer and friend of Agriculture, a Body of valuable information, which will impart a fresh impulse to agricultural improvement throughout our country.

Resolved, That the Society subscribe for —— copies, to be distributed as premiums.

On motion of Mr. SHERWOOD, the blank was filled with "one hundred," and the Treasurer was directed to subscribe for 100 copies.

On motion of Mr. NOTT, a committee of one from each county represented, was appointed to nominate officers of the Society for the ensuing year, and to report on the place for holding the next Fair, which committee consisted of the following gentlemen:

Mr. Hillhouse of Albany, Mr. Sherwood of Cayuga, Dr. Beekman of Columbia, Judge Van Bergen of Greene, Mr. Hungerford of Jefferson, Mr. Scovill of Lewis, Mr. Wadsworth of Livingston, Mr. Enos of Madison, Mr. Colman of Monroe, Mr. Vandeveer of Montgomery, Mr. Comstock of Oneida, Mr. Deniston of Orange, Mr. Miller of Oswego, Mr. Rotch of Otsego, Mr. Cory of Saratoga, Mr. Grove of Rensselaer, Mr. Duane of Schenectady, Mr. Leland of Steuben, Mr. Youngs of Queens, Mr. Halsey of Tompkins, and Mr. Sheffield of Wayne.

A bushel of very superior seed wheat, was sent to the Society for exhibition, by E. K. JAMES, Esq. of Poughkeepsie, accompanied by a letter, in which Mr. J. says:

"My wheat of last season yielded very indifferently, being completely flattened by a heavy rain and wind before it was ripe, and from which it never recovered. Three acres yielded only fifty bushels of the same quality as my sample, and four or five bushels of light shrunk grain. I have grown the same kind of wheat for the last ten years, and have invariably sold it for seed, for prices varying from $1.25 to $2.50 per bushel; my greatest crop, 27 bushels per acre; my lightest, 15 bushels. My soil varies—some fields a sandy loam, others a stiff clay. My general plan of culture—1st. Corn, well manured, say from 20 to 25 loads, (2 horse wagon,) of long manure—product from 50 to 65 bushels shelled corn per acre. 2d. Oats, product about 40 to 50 bushels per acre, 3d. Wheat, limed, about 20 to 30 bushels Barnegat *slacked* lime per acre; seed, 2 to 2½ bushels per acre, soaked in a pickle of salt or saltpetre, and rolled in lime or gypsum. The wheat was raised from half a bushel picked wheat, (by hand from a heap,) which was sown and produced 8¼ bushels, which, sown again, yielded 125 bushels. Twice within the last ten years, I have started a new clean picked half bushel of seed wheat, and my present stock is from the third and last half bushel. I have done this, fearing my wheat might deteriorate."

Mr. BEMENT presented for exhibition, some samples of Dairy Salt, accompanied by the following communication:

To the Members of the N. Y. State Ag. Society:

GENTLEMEN—I herewith offer for your inspection and notice, two samples of salt, one in the crude state, the other as prepared for the dairy or table.

In a letter accompanying the boxes, the manufacturers say, "This article is manufactured from pure clarified coarse salt, which we order made expressly for drying, grinding and preparing for sale, and we think it is superior to any now in use. It only requires one box or a peck, to convince any one that it is decidedly better than the common bag, or even the Salina salt. The farmers in this vicinity, will not use any other, and say the butter salted with it keeps much longer and is decidedly better flavored than that salted with common salt."

A small bag of this salt was presented to me the day previous to the Fair of this Society in September last, by S. Chapin, Esq. formerly a member of this society, but now a resident of Massachusetts. Not knowing any thing of its qualities, I did not present it for exhibition; since then I have made use of it in salting butter, and can bear testimony to its excellence, and do not hesitate to say that I think it far superior for the dairy to any other kind I have ever used. It appears perfectly pure, very fine, white and clean; of course strong. In the Liverpool sack salt, many small, dark specks are found, which unavoidably find their way into the butter, and render the working it much more laborious.

After the butter is worked over, it appears completely dissolved and thoroughly incorporated, not a particle is to be found, as is the case with the Liverpool bag salt; and so far, the butter made in my dairy, in the early part of October last, is now just as sweet and fine flavored as when first made, and from my limited experience, I most cordially commend it to the favorable notice of the members of this society, and more particularly to the dairy farmers of this state.

The quality of salt used in making butter and cheese, is of more importance, in my humble opinion, than most persons are aware of; and in many cases, to this cause may be traced the failure of both articles.

It is prepared at South Hadley, Mass. by Messrs. Bardwell, Damon & Co., and sold for 31c. per peck, or 112c. per bushel. If in boxes, like the one exhibited, 8c. will be charged for the box in addition. It is also put up in bags containing from one peck to a bushel each.

Respectfully submitted, by

C. N. BEMENT.

On the report of the committee appointed for that purpose, the following gentlemen were unanimously elected officers of the Society for the ensuing year:

JAMES S. WADSWORTH, Livingston, *President.*

Vice Presidents.

1st dist., JAMES LENOX, New-York.
2d " ROBERT DENNISTON, Orange.
3d " ANTHONY VAN BERGEN, Greene.
4th " E. C. DELAVAN, Saratoga.
5th " JONATHAN D. LEDYARD, Madison.
6th " Z. A. LELAND, Steuben.
7th " J. M. SHERWOOD, Cayuga.
8th " L. B. LANGWORTHY, Monroe.

H. S. RANDALL, Cortland Village, *Cor. Secretary.*
LUTHER TUCKER, Albany, *Rec. Secretary.*
EZRA P. PRENTICE, Albany, *Treasurer.*

Additional Members of the Executive Committee.—C. N. Bement, Albany; H. D. Grove, Buskirk's Bridge; Alex. Walsh, Lansingburgh; J. McD. McIntyre, Albany; Thomas S. Hillhouse, Watervliet.

On the report of the same committee, it was

Resolved, That it be recommended to the Executive Committee to hold the next annual Fair of the Society, in the city of Rochester.

On motion of Mr. COLMAN,

Resolved, That the State Society respectfully petition

* Several applications for the Premiums on Field Crops, have been received by the Rec. Secretary since the annual meeting of the Society.

the legislature, for as many copies as they may see fit to grant, of the Natural History of the State, now in course of publication, to be distributed in Premiums by the Executive Committee.

A committee consisting of Messrs. Hungerford, Van Bergen, Prentice, Sherwood, and Tucker, was appointed for the object specified in the above resolution.

Several resolutions of much interest in relation to the objects of the Society, and the manner in which they could be best carried into effect, were introduced, and excited an animated and interesting discussion, in which the President, Messrs. Rotch, Nott, Leland, Colman, Grove, Walsh, Denniston, Van Bergen, Sherwood, Prentice, and others, took part; when the several resolutions were referred to the Executive Committee.

On motion of Mr. COLMAN,

Resolved, That the thanks of the Society be presented to the President, Secretaries and Treasurer of the Society, for the efficient and able manner in which they have discharged their duties during the past year.

On motion of Judge VAN BERGEN,

Resolved, That the thanks of this Society be presented to the Young Men's Association of Albany, for the use of their Lecture Room.

The Society then adjourned to meet at the Assembly Chamber, at 7 o'clock, P. M.

At 7 o'clock, the Society met in the Assembly Chamber, where a large audience were in attendance to hear the annual Address of the PRESIDENT.

On the conclusion of the Address, Vice President DENNISTON in the chair, the following resolution, on motion of Mr. COLMAN, was unanimously adopted:

Resolved, That the thanks of this Society, be presented to their President, JAMES S. WADSWORTH, Esq. for his interesting, instructive, and useful Address, and that a committee be appointed to request a copy for the press. Messrs. Colman, Beekman, and Van Bergen, were appointed the committee.

MR. WADSWORTH'S ADDRESS,

Before the New-York State Agricultural Society, January 18, 1843.

GENTLEMEN:—In complying with the request of the Executive Committee of the Society, to address you upon its progress and prospects, I find the embarrassment, which, under any circumstances, would on my part attend the performance of this duty, greatly enhanced by the recollection that the task which now devolves upon me, was, on the occasion of our recent annual Fair, so happily and eloquently performed by the late distinguished chief magistrate of our state. I cannot but regard that event as one of the auspicious incidents in the history of our society. I trust that the appeal which we then listened to in behalf of the dignity and utility of our avocation, breathing as it did throughout, a high patriotism, and a deep solicitude for the objects which this society is intended to promote, was not lost upon any who had the happiness to hear it. I believe that few of us left the capitol on that occasion, without a higher sense of the importance of self-cultivation as well as agricultural progress, and a renewed determination to improve not only the farm, but the farmer.

The annual Fair of the Society, was indeed, in all its main incidents, deemed by its friends eminently successful. The large collection of those animals, the domestication of which seems so intimately connected with the prosperity of the human race, marked the progress of agricultural improvement, and the great concourse of observing spectators bore testimony to a widely diffused interest in the objects of the association.

A large portion of the improved breeds of farm stock known in this country, or in Europe, were represented on the occasion referred to, by animals of the highest order.

In the collection of Agricultural Implements and Domestic Manufactures, the exhibition was rich in the evidences of the ingenuity and skill of American mechanics.

In the distribution of premiums, the society called to its aid as far as possible, eminent agriculturists of other states, and it is gratifying to know their decisions were almost universally received with the deference due to their acknowledged competence and impartiality.

I find great pleasure, in referring to these indications that the society is, slowly perhaps, but certainly, accomplishing the objects for which it was established, and by the liberality of the legislature endowed. You will, gentlemen, have seen enough within your own observation, to satisfy you that your particular labors are not barren of the happiest results.

It may well add to the gratification, and to the hopeful anticipations with which we regard these evidences of progress, so unequivocal and so universal, that they are achieved in spite of the most depressing embarrassments.

The condition of the farming interests of our country, is indeed truly remarkable. The price of agricultural products has fallen to less than half the range of prices obtained during a period of years so long that they had come to be regarded as settled and permanent. Under this impression farms were bought, contracts made, improvements undertaken, habits of expenditure acquired, which, under the present range of prices, cause difficulties as extensive as they are in many cases unfortunately, irremediable.

Few of us are aware of the amount of individual suffering, the sacrifice of property accumulated by years of patient toil and frugality, the disappointment of honest hopes, of independence and comfort in advancing years, effected by this revolution in prices. It is no uncommon spectacle to see men now far advanced in life, who in their earlier years have been successful pioneers, compelled to abandon the comfortable homes and broad fields, which they have carved out of the wilderness, and seek again, amidst the hardships and privations of a forest life, the recovery of their fortunes.

If none had been swept away by this whirlwind, but those who sowed the storm, there would be slight ground for our sympathies; but unfortunately the cause was as universal and all powerful, as it was concealed and sinister.

It would be foreign to our present purpose to inquire into the origin, the history, and the remedy for these evils, and I fear that we could not enter upon the task without trespassing upon those political questions from which I hope this society will ever keep aloof.

The pain which these wide spread disasters must inflict upon every philanthropic mind, will be greatly relieved by the fact that they are so universally met in the right spirit. Renewed industry and greater economy, are every where the order of the day. But the fact to which I wish especially to invite your attention, as the advocates of agricultural improvement, is that it has not escaped the reflection of the great body of farmers, that the best way to encounter low prices is by improved cultivation. New agricultural implements, new modes of cultivation, improved breeds of farm stock, were never more readily adopted than at this moment of extreme depression of the agricultural interests. There is in fact, every where depression, but no where apathy. We meet in every direction the most serious difficulties, the most extensive embarrassments, but we find too—thanks to the influence of our free institutions, and the acknowledged energy of our race, every where at work, the perseverance, the patience, and the versatility of expedient, before which all obstacles of *human creation* must give way. Such emphatically, are the difficulties with which we have to contend. They are the work of men's hands. They come not from the great Dispenser of good and and evil, for never were the bounties of Providence more marked in our country than at this moment. Our harvests have been almost universally abundant. Pestilence and famine are no where to be found.

We may thus rely with a well grounded confidence upon the energy of a people at once educated and laborious, to overcome embarrassments which now so severely oppress the whole community. If we turn to the condition of other civilized nations, we shall find that in the comparison, we have rather cause for self-congratulation than despondency. Widely different is the situation of that people, where the wages of labor are so high, that the capitalist finds it difficult to procure an adequate return for his investments, and the situation of a nation in which the wages of labor are so low, that the laborer finds it difficult to supply the daily requirements of his half clothed, half fed family.

What are all the pecuniary difficulties so universally felt here, compared with the sufferings of a people of which no small proportion close the toils of the day with barely enough to supply its wants, and without knowing where, in case of sickness or loss of employment, they are to find the food which will keep them alive the next forty-eight hours?

I do not point to these comparisons to gratify the impulses of national vanity, but to show how much more ground we have for renewed and hopeful effort, than for that despondency wich seldom seizes but upon feeble uncultivated intellects.

We have, gentlemen, other reasons for confidence in the future; even for the most sanguine anticipations of the developments of coming years.

The application of science, the most profound which has yet been attained by the far reaching efforts of the human mind, to all the products of our industry, to the soil, the crop, the animal, has been reserved for the age in which we live. It is not claiming too much, to say that more progress has been made in this direction within the last twenty years than in any previous century. Our own countrymen, it is gratifying to perceive, are securing their share of this abundant harvest. Our chemists and geologists will not, we may be sure, rest contented as industrious gleaners after the Davies, Liebigs and Johnstons of other countries, but will push forward into the ample domains, which even those acute discoverers have not penetrated.

From the origin of our race almost to the present time, the path of the husbandman has been clouded in darkness and doubt. From the sowing of the seed to the gathering of the harvest, mystery attended every step. The first link in the great chain of cause and effect was hidden in uncertainty. The precepts of tradition, the result of a multitude of experiments, were founded mostly in wisdom; but they were as inexplicable as they were sound. Not so now. The scientific analysis of soils, of manures, and of vegetable products, explains not only the workings of nature and the practices of art, but opens an inexhaustible field of new combinations and novel results. To spread far and wide this new light in the galaxy of human knowledge, is one of the objects,—I think it will be conceded to be the first object of this association.

I will not attempt to enforce by any argument or illustration of mine, the high importance of this trust. If other nations in the vigor of maturity, with more leisure and more means than we possess, have out-stripped us in the race of philosophical discovery, let it be *our* boast, that we have spread these discoveries *wider*, and made them at once available by making them part of the current knowledge of the nation. Let it be our first aim to diffuse knowledge, where the constitution has rightly given power, to the whole people.

It is not, gentlemen, the sole object of our Society, to reward those who bring to our Fairs the finest animals, or to remunerate those who, with skill and industry, raise the best crops. These are but the means, and part of the means, by which it is hoped to achieve higher and wider ends. We wish, by association, by comparison of ideas, and by a generous emulation, to diffuse among ourselves and the mass of the agricultural community the results of experience, the lights of science, and the productions of art.

Of the incalculable power, for good and evil, of association and combined effort, the present age abounds in illustrations. That this great element of man's power has often been wielded to trample upon the equal rights, the peace and happiness of society, cannot be denied. Of the many instances in which, with widely different and higher aims, it has effected the noblest achievments, I shall only refer to one. With what language can we describe, with what powers of calculation estimate the wide spread good accomplished, the deep misery warded off, by temperance associations? What individual, wielding even a despot's sceptre—what government, monarchial or democratic—what law—what armed force, could have achieved the great results brought about in our day, within our own observation, by these efforts? With this signal illustration before us, we can not lack confidence in any efforts wisely directed to a good end. With motives which cannot be impeached, with objects which can no where be condemned, asking no special privileges, requiring no exclusive immunities, seeking only to elevate and render more effective that labor from which man is destined never to be exempt, we may surely here, if any where, call to our aid the great power of association and combination. With this element of strength we wish to awaken the public mind to a sense of the importance of our avocation, and to dispel whatever may be left of that ancient prejudice, that the tiller of the soil is the drudge of the human race.

It is strange that it should have been overlooked, even in the darkest days of despotism and ignorance and superstition, that he who sows the seed and reaps the harvest, works not only with the plow and with the hoe and with the scythe, but that he wields, far beyond the laborer in any other branch of industry or art, the elements and powers of nature. There is certainly no pursuit in which so many of the laws of nature must be consulted and understood, as in the cultivation of the earth. Every change of the season, every change even of the winds, every fall of rain, must affect some of the manifold operations of the farmer. In the improvement of our various domestic animals, some of the most abstruse principles of physiology must be consulted.

Is it to be supposed that men thus called upon to study, or to observe the laws of nature, and labor in conjunction with its powers, require less of the light of the highest science, than the merchant or manufacturer? Or is it to be believed, that men who go weekly, almost daily, to different occupations, changing with the almost unceasing changes of the seasons, and whose business is to bring to maturity such a multiplicity of products, exercise less the highest intellectual faculties of man, than the laborer who, day after day, and year after year, follows the unchanging manipulations of art?

Happily for the interests of the farmer, the history of our country abounds in evidence that this great misconception of the nature and tendency of agricultural labor, no longer exists. I can not, gentlemen, allow this occasion to pass without referring to a recent event, which, with whatever diversities of opinion we may regard the great political questions which agitate our country, we, as farmers, cannot dwell upon without emotions of pride and pleasure. When the people of a great state, which, in population, in wealth, in power, if it had not voluntarily surrendered its immunities, might stand up among the independent empires of the earth, without fear and without reproach—of a state, which, in achievments of industry, of genius, of enterprise, we may search the history of the world, and search in vain for a rival—when the people of such a state turn to the ranks of its practical farmers for the unimpeachable integrity, the enlightened wisdom requisite to administer their highest trust, we may well claim that agricultural labor is not inconsistent with the highest intellectual cultivation and moral power.

It is not alone in the brilliant results of scientific investigation, nor in the fertility of the soil, nor in the general salubrity of the climate, that the American farmer finds the ground of his brightest anticipations for the future. There are other and higher elements in the composition of his fate. The government which watches over him is the government of his choice—a government in which the permanent interests of the great mass of the people are secured by placing the power in their own hands. Under such institutions the pendulum of public justice may sometimes vibrate between dangerous extremes, but it must eventually repose where justice and the interests of the many, require that it should rest. Such are the hopes of the farmers of our country. It is not to be denied that their interests have been sometimes neglected, and their rights sacrificed to the sinister aspirations of classes more favorably situated for political combinations; but if there is any foundation for our faith, that a free government is the fountain of equal justice, their abberrations must be corrected in the slow but certain progress of truth and right.

I trust that American agriculture will illustrate and confirm the striking remark of the author of the "Esprit

des Lois," a writer, the most philosophical and liberal of his time, "that it is not those countries which possess the greatest fertility, which are the best cultivated, but those which have secured the most liberty." I find this suggestion so flattering to our hopes, eloquently commented upon by a late distinguished agriculturist of our country, in an address which he delivered before the Agricultural Society of Pennsylvania, and I gladly avail myself of this opportunity to pay to his memory a tribute of respect, which is due, in a more eminent degree, to but one other name in the history of American farmers and patriots. With many other improvements in agriculture, Judge Peters was emphatically the author of the plaster and clover culture. The time which your patience will allow me to occupy on this occasion, will not permit me to recount the many experiments, at once ingenious and philosophical, with which he demonstrated the wonderful efficacy of plaster, nor the efforts, equally persevering and philanthropic, with which he labored to introduce into general practice, this great fertilizer. He succeeded. None but those well acquainted with the course of husbandry in our wheat growing districts, can estimate how much of the eighty-four millions annually produced in our country, is owing to the introduction of plaster and clover. The benefits of this improvement are to be counted by annual millions; and I call it up to your attention, not only to pay the debt of gratitude due to its distinguished author, but as an incentive to those who, with the better instruments of a more advanced science, have the same field of practical improvement before them. It is happily the nature of human knowledge that the more it achieves, the larger is the field of achievement. As the outer circle of invention and discovery is pushed farther and farther from the center, the more numerous and of a higher order are the objects which present themselves to the investigation of those whose lofty ambition it is to add something to the mass of human attainment.

The Society has endeavored to contribute something to this onward movement by offering prizes for essays upon the application of science to agriculture. I trust that the result will vindicate the wisdom of this policy, and lead to its continuance.

In this country, with just laws, justly administered, where the popular voice can promptly correct every oppressive enactment, where, with common schools and an untrammeled press, knowledge circulates as freely almost, as the air we breathe, it would be surprising, and not less discreditable than surprising, if agricultural improvement did not keep pace with the progress of the country in every other respect. For one, I have no fears on this point; I believe that our progress, with or without Agricultural Societies—though always greatly accelerated by them—is to be decided and rapid. I am not however, unaware, nor should we ever lose sight of the fact, that agriculture, like learning, has had its dark ages. It has risen to great perfection, receded, and rested for centuries without any apparent improvement. The history of the world abounds with evidence that the cultivation of the earth was at an early day carried to a high point.

In China, it is well known that for uncounted centuries a degree of skill has been exhibited in the preparation and application of chemical and vegetable manures that is not, even now, equaled in any part of christendom. A recent popular writer counts it as not the least valuable result which may flow from the opium war, as it is properly designated, and which it is to be hoped for the honor of humanity, is now terminated, that by opening a more general communication with that extraordinary people, we may learn something of their agricultural skill. The Chinese are not the only people beyond the pale of Christianity and modern civilization, who have attained a remarkable degree of skill in certain branches of husbandry. The aborigines of South America and Mexico practiced irrigation upon a scale, and with a perfection of detail, not surpassed in any modern improvements. The Spaniards, superior to them in the art of war, overcame them in battle, but have not equaled them in skillful and industrious tillage.

Throughout all those immense regions of British India, where the indomitable perseverance and courage of the Anglo-Saxons have subjected millions to the control of thousands, the conqueror has learned more than he has been able to impart of practical wisdom directed to the cultivation of the soil. A high cultivation, accompanied by the use of irrigation and mineral and vegetable applications, has there carried the productive powers of the earth to a point never yet attained in those parts of the globe claiming to be more enlightened.

In ancient Egypt, the results were, if possible, more extraordinary. There, not only agricultural productions, but the imperishable monuments of art, surpass even the comprehension of modern science.

Coming down to the early days of the Christian era, we find the Roman writers abounding in sound precepts and suggestions, which even now might be adopted with advantage. Nearly the whole of Varro might be read with profit by our modern farmers. True, it is often tinged with a superstition now happily discarded, and relates to a state of society and government, widely differing from our free institutions.

But in all that relates to tillage, to the preparation and application of manures, his suggestions accord with the views of our best modern practical farmers. In the classification of mineral and vegetable manures, such as lime, marl, and many varieties of compost, he gives to each the relative value which has been affixed by the most profound chemical analysis.

If it is somewhat discouraging to look back and find ourselves but little in advance of the remotest times, in many departments of our profession, we may at least congratulate ourselves that we live in an age when agriculture is in the ascendant. It is no longer given up to serfs and slaves, as the fitting occupation of the most ignorant portions of the community. It now takes its rank among the honorable and elevating pursuits of industry. To follow the plow and tend the flock is no longer, here at least, the mark of ignorance and servitude, as under a false and despotic system it was, and in some parts of the globe still is. In this, we stand upon ground which the ancients never attained. It is the great achievement of modern times. The rights of man and the dignity of labor are vindicated; the one follows from the other. Agricultural improvement then rests upon a foundation on which it never stood before. It is sustained by free institutions; it is the result of laws, wise, because liberal. The enfranchisement of the many, the elevation of the masses, must go hand in hand with the intelligent, industrious and prosperous cultivation of the earth. If agriculture owes much to the benign influence of our institutions, liberty owes not less to agriculture.

Where do we look for the calm discretion, the disinterested patriotism, which must sustain a representative government, but to the great community of cultivators of the earth? Even those most skeptical as to the fitness of man for self-government, admit that if the experiment ever succeeds, it will be in a nation of farmers. The experiment, thank Heaven, has succeeded; it has succeeded in a nation of farmers; and while we must not be guilty of the illiberality of doubting that the great manufacturing nations of other continents may be fitted to administer the high duties of freemen, it becomes us to cherish a profession which, more than any other, prepares man to receive the highest blessing of his race in this world—a free government. We must cherish it by industry, by virtue, by intellectual cultivation; by connecting it with science and the arts, and with everything which can elevate and adorn it. If we do our duty by ourselves and our children, agriculture will never again, it is to be hoped, know the dark ages in which for so many centuries it slept with liberty and learning. Let us do our duty in the responsible station and happy era in which Providence has cast our destiny, and I trust the day is far, far distant, when we shall cease to be a nation of farmers and a nation of freemen.

GEOLOGICAL SURVEY OF NEW-YORK.—PART III.

In our last, we briefly noticed the reception of Parts II. and III. of the great work now in progress under the patronage of the State; Part III. embracing Mr. VANUXEM's Report of the 3d Geological District. We have had time to examine it with attention, and shall give a brief notice of the system pursued by the Professor, and its results, as shown in the volume before us. The Report includes the survey of the counties of Montgomery, Fulton, Herkimer, Otsego, Oneida, Lewis, Oswego, Madison, Onondaga, Cayuga, Cortland, Chenango, Broome, Tioga, and the eastern half of Tompkins, these composing the 3d Geological district, and constituting, as will be seen at a glance, one of the most interesting portions of the state.

"In this Report, the term *New-York System* will be used, and will include all from the Potsdam sandstone, inclusive, to the coal formation." The following, gives a tabular view of the N. Y. System in the ascending order, embracing the general divisions, which are purely geographic, and the several groups or classes of rocks in rising from the Potsdam, or in other words, the primitive rocks of this district, to the Catskill or old red sandstone group, being the one the highest in the N. Y. System, and lying immediately below the coal formation of Pennsylvania:

New-York System.	Champlain Division.	Potsdam sandstone, Calciferous group, Black River limestone, Trenton limestone, Utica slate, Hudson River group.
	Ontario Division.	Gray sandstone, Medina sandstone, Oneida conglomerate, Clinton group, Niagara group.
	Helderberg Division.	Onondaga salt group, Waterlime group, Pentamerus limestone, Catskill shaly limestone, Oriskany sandstone, Canda-galla grit, Scoharie grit, Onondaga limestone, Corniferous limestone.
	Erie Division.	Marcellus shales, Hamilton group, Tully limestone, Genesee slate, Portage group, Ithaca group, Chemung group.
	Catskill group.	

With the above important and convenient arrangement, the whole of the rocks and other geological products of the 3d district will be reduced to a few simple heads, namely four systems and seven divisions, as in the following table:

"1. Primary System, requires no further illustration.
2. Taconic System, Embraces the products between the primary and the Potsdam sandstone, which are very partial in this district.
3. New-York System,
   1. Champlain division.
   2. Ontario division.
   3. Helderberg division.
   4. Erie division.
   5. Catskill division.
4. Quaternary System,
   1. Transported materials.
   2. Local materials."

It is to be presumed that the arrangement and classification here adopted, will be that of the other parts of the survey, so far as they are applicable; and thus the Geology of the several districts be wrought into a beautiful and harmonious whole. It may well be questioned whether there is another country on the globe so well situated for an investigation of all the rocks between the primitive and the coal, as New-York. Nearly the whole of the Mississippi valley, large portions of Tennessee, Virginia, Kentucky, Pennsylvania, &c. are of the same formations, and when the New-York systems are fully elucidated, those of the other states will also be explained.

The Primary rocks have comparatively little influence in the 3d district. They appear in the north parts of Montgomery and Herkimer, and the east part of Lewis, and in the valley of the Mohawk in the shape of uplifts, as at the Noses, and the Little Falls. They constitute parts of the great central nucleus of the 2d District, of which Mt. Marcy is the most elevated point.

With the Transition rocks which overlie or rather lean upon the primary, a new era commences. "As the primary class is distinguished for its crystaline products, being pre-eminently the domain of *crystalization*, showing that solution reigned universally, a new element is here introduced, that of *life*, giving rise to an important class of characters, whose full development, as in man, forms no part of any of the past known geological eras." We shall briefly notice each group in the ascending order adopted by Prof. Vanuxem.

POTSDAM SANDSTONE.—This rock, in the second district, is an important one for thickness, extent, and economical purposes. In New Jersey and Pennsylvania, it is found occupying the same position as in this state. In the 3d district, this rock is limited to a few points chiefly in the N. E. part of Lewis co., and at the uplifts of the Noses, and the Little Falls on the Mohawk. No organic remains have been found in this rock, with the exception of the Lingula at Keeseville; thus showing that this fossil is one of the oldest yet known, and as the genus is also recent, it proves that it has existed through all the ages of known organic existence.

CALCIFEROUS GROUP. (*Transition sandrock of Eaton.*)—This group is entirely confined in this district, to the counties of Montgomery, Herkimer, Oneida, and Lewis. Fossils are rare in this rock, but there are some fucoidal layers peculiar to this rock. One of its most remarkable products is its beautiful quartz crystals, which are most abundant at the Noses, Little Falls, and Middleville. Anthracite is often found in connection with these crystals, and sometimes within them. The fossils found, were an *ophileta* and an orthocera, remarkable as being the oldest fossils found in the 3d district.

BLACK RIVER LIMESTONE. (*Mohawk limestone, Transition limerock of Eaton.*)—This rock forms the remarkable cliff of limestone which extends along the Black River from Boonsville through Lewis, into Jefferson co. It is found in a variety of places on the Mohawk, as at the quarries near Amsterdam, and it also forms the base of the Trenton limestone. It is an important rock, exercising a decided influence on agriculture, particularly in the counties of Lewis and Jefferson. The difference between the influence of the primary and transition rocks on soils, is strikingly seen in the Black River valley, below Boonville; on the left, the successive ranges of uplands are settled to their summits, while on the right, the primitive rocks approach the river, and are still covered with their dense and primeval forests. This rock is one of the most valuable for building purposes, and for lime, found in the Mohawk valley, and numerous quarries are extensively worked.

TRENTON LIMESTONE. (*Metalliferous limerock of Eaton.*)—The best exposition of this rock, is at the Falls on West Canada Creek, near Trenton. This rock is well characterized, both by its fossils and otherwise. Some of the fossils, such as the *Strophema deltoidea*, are not found out of this rock, and as they are abundant in this, give it great value as a point of comparison for distant localities. The *Favosites lycopoclites*, so called from its resemblance to the puff ball fungus; and the trilobite, *Isotelas gigas*, are also characteristic of this rock. This rock is entirely confined to the counties of Montgomery, Herkimer, Oneida, and Lewis. Towards the northern part of Lewis, its thickness is not less than 300 feet. The cliff at Frankfort, Kentucky, and the bluff at Nashville, Tennessee, are of Trenton limestone. The Trenton limestone extends without interruption, from the East Canada creek to the St. Lawrence, and is important for its geological character, and its agricultural and economical uses.

UTICA SLATE. (*Metalliferous Greywacke of Eaton.*)—"The Utica slate contains no fragments whatever of other rocks. It is the same material mineralogically, which separates the dark colored layers of the Trenton limestone." With this rock, the greater part of the fossils so abundant in the Trenton limestones, ceased; although a few are common to both, and some exist only in the lower part of the slate. Two fossils here make their appearance, not found in any lower position. *Beck's triarthus*, and the *Dentated graptolite*. The city of Utica is built on this slate, and the creeks near the city furnish the best places for its examination. Sulphurets of lead, iron and zinc, have been found in this rock.

HUDSON RIVER GROUP. (*Frankfort slate of the Reports.*)—This rock or group, embraces the Frankfort slates and sandstones, and the sandstone shales of Pulaski. It rests upon the Utica slate throughout the district. In Schoharie co. this group is undisturbed, and its thickness not less than 700 feet. This is an important rock in all parts of the world; is the source of the springs of Saratoga and Ballston, the springs produced by boring, as at Albany and Hampton; and is the lowest rock from which salt has been manufactured from brine, in the state, or in which brine springs are found. In this district, this group only shows itself in the counties of Montgomery, Herkimer, Oneida, and Lewis. The upper part of this group consists of the Pulaski slates and shales in Oswego co., and is the only rock to be seen at

Pulaski and the vicinity. The fossils *Pterinea carinata, Cyrtolites ornatus,* and *Pentacrinites hamptonii,* as well as some others, are characteristic of the Hudson River group.

GREY SANDSTONE OF OSWEGO.—This sandstone is the next mass to the sandstone shale of Pulaski, but it wants the fossils of the latter. It is of considerable thickness, forming the Falls of Salmon and Mad rivers, and it appears in the Mohawk valley, at Woodruff's quarry, near Rome. This rock is almost destitute of fossils. It forms the bed of the river, and the shores of the lake at Oswego.

MEDINA SANDSTONE. *(Red sandstone, Niagara sandstone of the Reports.)*—No well defined line separates this sandstone from the one below, or the grey sandstone, the color of the red sandstones frequently penetrating some of the layers below. This rock has the singular fossil called the *Fucoides Harlani*, and in no other part of the New-York System has it been seen. This fossil marks this rock in Pennsylvania and Virginia, and shows the value of fossils in determining the character of rocks. This rock is generally of a brownish red, and is found in Oneida, Oswego, and Cayuga counties. This rock forms the banks and the falls of the Oswego river, at Fulton. It forms the shore of the lake east and west of Sodus Bay, and underlies a large part of Oswego co.

ONEIDA CONGLOMERATE. *(Millstone grit of Eaton; Grey Band of Rochester.)*—This is the oldest distinct conglomerate rock or mass of the 3d district. It is the same as the Shawangunk conglomerate, and is composed of quartz pebbles and quartz sand, firmly cemented. Its position is better defined in Oneida, than elsewhere, hence its name. Some of the layers are five or six feet thick. It has few fossils, though stems of fucoids traverse some of the layers. In some places, this shows a wearing from water, and some obscure scratches.

CLINTON GROUP. *(Ferriferous sandrock of Eaton.)*—The Clinton group forms the lower part of the Protean group of the Reports, the upper part forming the Niagara group of this volume. It is well marked by its beds of iron ore and its marine plants; extends east and west through the district; in Herkimer and Oneida, being south of the canal, but in Madison, Onondaga, and Cayuga, to the north of it. This group runs out to the east before reaching Scoharie co. as there the Onondaga salt group and the Frankfort slate, are so near each other as to preclude any other formation. Near Utica, this rock is extensively quarried for building, and the iron ore strata are between the upper and lower layers of sandstone. It is interesting, as furnishing in its prolongation to the west, the ore for the Taberg, Constantia, Lennox, and Wolcott furnaces. In the rocks of this group, the *Atrypa affinis* is found, the lowest point at which any of the species of this peculiar division of the Atrypa appear.

NIAGARA GROUP. *(Lockport group; Geodiferous Limerock of Eaton.)*—This rock is very thick in the western part of the state, forming the lime rocks of Niagara, Lockport, Rochester, but thins out to the east of Onondaga county, and leaves not a trace as far east as the village of Mohawk in Herkimer co. This rock extends to the Mississippi, and is the same stone in which the mines of Dubuque and Galena are found. There is a limestone slate of considerable thickness, underlying this rock at Niagara, Rochester, &c. but which is seen but a short distance in the 3d district. This group of rock furnishes abundance of the best building stone, and is extensively burned for lime. The upper surface of this rock has excited great attention from its polished and grooved surface, it being the first of the series in which this remarkable phenomena has been observed to any extent. That it is different from a mere water-worn surface, it is believed none will deny, who have seen this rock in place, and carefully noted its appearance.

ONONDAGA SALT GROUP. *(Second Greywacke of Eaton.)*—This is one of the most important groups of rock in the state, furnishing as it does the brines of Onondaga and Cayuga, and embracing all the gypsum masses of Western New-York. This group is composed, 1st, of the red shale with green spots resting on the Niagara limestone; 2, alternate ranges of green and red shales; 3, two ranges of plaster beds with the hopper shaped rocks, and the vermicular or lime rock; and 4, the upper mass with cavities formed by sulphate of magnesia. These several masses are well represented by a woodcut in the Report. This group commences near the Hudson river, appears in the north part of Otsego co. makes its appearance by the side of the Erie canal at the east end of Madison co. The whole of the deposits named above, are best seen between Oneida creek and the Cayuga lake. Their greatest thickness is in Onondaga county. No gypsum in quantity is found east of Vernon; and very little as far as this point, while to the west it extends to the west line of the state, and across Canada into Michigan. Among the various products of this group of rocks which appear in the vicinity of Syracuse, is a well characterized serpentine, or metamorphic rock of the Report. It is on the street north of the canal, a little east of the village on the side hill, and shows itself for a number of rods. Such rocks have usually been attributed to volcanic agency, but there is no evidence of such a state of things having ever existed here. "All that is required," says Prof. Vanuxem, "is the presence of the elements of the products observed at Syracuse, and in a state admitting of solution and moisture, to which every degree of heat added would greatly aid their mutual action upon each other; and from solution, crystalization would take place, and thus metamorphic products or rocks would be formed, no igneous action commonly so called being requisite, but a thermal one only."

But by far the most important product of this group is the salt springs of Salina and Montezuma, which are capable of furnishing any desired quantity of salt annually, and from which three millions of bushels per year, are now made. One of the most important questions connected with the economical use of these springs is the existence or non-existence of rock salt in the vicinity in an accessible form. That rock salt has existed in this formation does not admit of a doubt; the hopper shaped crystalizations prove this. All the borings that have hitherto been made, have been conducted on the supposition that the beds of fossil salt underlie the plain of Salina, or the lake itself. One of these continued to the depth of 600 feet, passed through part of the second deposit and the whole of the first, ending in the limestone of the Niagara group. The various explanations that have been made, prove that a deep excavation has been made in the first and second deposits in the elevation of the Onondaga valley, which has been wholly filled up, with the exception of the shallow basin now occupied by the Onondaga lake. The deepest boring made in the mass of rolled stones and sand is about 270 feet, during the whole of which the water continued to increase in strength; and the repeated borings that have been made from that, the springs of Syracuse, Salina, Geddes, and Liverpool, have the same origin in this excavation, which must operate both as a drain and reservoir. If water at, or near the point of saturation could be reached, it would be more valuable than ordinary rock salt, as this usually requires solution to free it from its impurities. The real character and extent of this excavation, is one of the most important geological problems yet to be solved in the state, and the most interesting, so far as the great product of salt is concerned. A knowledge of the structure of the district, the dip of the rocks, and the greater development of the series at this point seems to render it certain that the real source of the brine springs is farther up the valley, and that borings for rock salt, to be successful must be made at points farther to the south, and higher in the series of rock than has yet been attempted. The deep excavations made in the Marcellus and Hamilton shales, and now occupied by the remarkable chain of lakes in the 3d and 4th districts, are similar, with the exception of the filling up, to the one now occupied by the brines in the red shale of the salt group.

[To be continued.]

CULTURE OF THE PEA.

THIS valuable crop has been unusually productive the past year, and will to a considerable extent supply the place of the corn crop, which in many parts of the country has proved a partial failure. This illustrates the old remark that corn and peas rarely succeed well in the same season. The author of the "British Husbandry," remarks that "few things can be more uncertain than the produce of the grain, which seems entirely dependent upon circumstances regarding the state of the atmosphere at the time of blossoming, and with the precise nature of which we are unacquainted. In dripping or wet seasons, which are favorable to their growth, so much as 84 bushels of Marlborough grey peas have been got from a single acre, though on good soils and favorable season, 30 bushels is considered a fair crop."

To the great moisture, and consequent coolness of the past season, we may doubtless attribute the excellence of the pea crop, which in several instances has far exceeded all that we have ever before known in this country. A young farming friend of ours had a crop that good judges estimated at 60 bushels per acre, but which unfortunately, in spite of every exertion to save it, was so damaged and wasted by the storms and long continued wet weather of September, all accuracy as regards the quantity was out of the question. The ground was in corn the year before, and heavily manured. It was plowed in the fall, once in the spring, sowed to peas of the Marrowfat kind, and well rolled.

But the greatest crop we believe on record, is the one grown by Mr. Wasson, of Leicester, Livingston co., as given in the N. G. Farmer of November. They were of the kind called the short pod English pea, sowed on ground used for corn two years previous, soil black and mucky, three bushels of seed to the acre, and the quantity grown on one acre, measured at the time of threshing, was 88 bushels and 8 quarts.

The pea, like corn, delights in a rich deep soil, as in these it suffers less from drouth than on any other; and on such it is valuable as preparatory for wheat, a good crop smothering all weeds, and leaving the soil clean and in good condition. There is little use in attempting to grow the pea on poor or unmanured soils, and those who, on such soils as these, follow the pea with wheat, are apt to have their labor for their pains. Peas, with corn or roots, form a good part in any rotation; manure operating favorably upon them, and they leaving the soil for a grain crop unexhausted.

RICE—ITS CULTURE, &c.

WE are gratified to learn that the attempts which have been made to introduce the rice culture into Louisiana, have been eminently successful, and that the rice crop of that state, will the present year, be by no means inconsiderable. There are large quantities of low lands in that state, that have been hitherto deemed of no value, as their half submerged state prohibited other crops, which will now be devoted to rice, and thus add to the means of export and subsistence in the states. In a late number of the London Farmers' Magazine, is a reply to some inquiries as to the value of rice for feeding pigs, in which the writer says—"I and my friend, purchased from the Government stores, several tons of damaged rice, at a cheap rate, and with this we fattened a lot of pigs; and such pork I never saw, either before or since. The fat, instead of being loose and porous, as it frequently is, was as firm and as solid as the lean, and the flavor of the meat was altogether superior. The way in which the rice was prepared was this. My copper held 40 gallons. In the afternoon this was filled, or nearly so, with water; as soon as the water boiled, the fire was raked out, and two pails full of rice shot in; the whole was then closely covered down, and left till the morning. On the following day the copper was emptied of its contents, which consisted of a thick jelly, which could only be taken out with a shovel. With this the pigs were fed, and the effect was what I have stated above."

It is not an uncommon thing that rice becomes damaged and unfit for human food, and considerable quantities have been thrown away, that it is probable might have been advantageously used in feeding pigs.

IMPROVEMENT IN WHEAT.

The name of Gen. HARMON, of Wheatland, Monroe co. promises to become as honorably connected with the improvement of the great staple article of food in this country, wheat, as has that of Le Couteur with the progress of wheat culture in England. The business could not have fallen into better hands. Possessed of ample means, his soils admirably adapted to wheat, and in the very center of the best wheat district of the states, with a fund of information on the subject, gained from experience and from books, and with a patience and perseverance which enables him to pursue any course of inquiry to its final result, General Harmon is the man to enter upon and carry out such improvements in the culture of wheat, as circumstances may suggest.

General Harmon's principal crop is of the variety he calls the Improved Flint, which had its origin in the common *white flint* wheat, introduced into Western New-York not far from 1820. This wheat is so well known as to need no description. It is hardy, not very liable to rust, never shells in gathering, and weighs well. The most serious objection formerly made to this wheat was the difficulty of threshing it by hand, a difficulty done away by the introduction of the threshing machine. On favorable soils its yield is from 20 to 25 bushels per acre. By careful cultivation and selection, and not allowing any other kinds to come in contact with this wheat, either in the field or the granary, General Harmon has brought the *Improved Flint* to a purity and uniformity of quality, we have never seen equaled. This wheat is much sought after for seed, and much the greater portion of his crop is always used for this purpose. The advance he makes on the price, over ordinary wheats, is a reasonable, not extravagant one, and his sales are consequently extensive. We had the pleasure of seeing at the house of a farming friend of ours in Onondaga co. last fall, 20 barrels of this wheat he had just procured for seed, and a beautiful sample it was, as all who have examined the specimens produced by General Harmon at the State Agricultural Fairs will readily believe.

Gen. Harmon is experimenting with a variety of other wheats, some of which have been lately introduced into this country from abroad, and others are kinds which have long been known to our wheat growers. Among these are the Kentucky white bearded, more commonly known as the Canada Flint, a valuable wheat, the berry plump, white and heavy; the old Genesee Red Chaff, grown since the first settlement of the country, and were it not for its liability to rust and blight, would be one of the best wheats in the state. Some of the heaviest crops of wheat ever grown in the United States, were of this variety; 40 acres of it have been known to average more than 60 bushels to the acre. The Wheatland Red wheat is a variety originated by Gen. Harmon, and promises to be a valuable sort, ripening early, and producing a fine berry. He also cultivates the Virginia May, long a great favorite in the south; the Talavera Wheat from England; the English Flint, much resembling the old Genesee Red Wheat; with other varieties not necessary to enumerate.

In sowing wheat, Gen. Harmon pursues the course long since recommended in the Genesee Farmer and in the Cultivator, of thoroughly washing in brine, and drying with a quart of quick lime to a bushel of the seed. We have never known a crop of wheat damaged by smut where this method was faithfully practiced, and very few escape without some smut, where it is not. We can recommend from our own experience, the benefits of a change of seed, and with us that change has been most beneficial when the seed has been brought from oak lands, and which contain less vegetable matter than is usually found on those of beech or maple. Gen. Harmon prefers cutting wheat as soon as it is well out of the milk, or when the berry will yield to the pressure of the thumb and finger easily. His experience in this respect, agrees with that of our English correspondent, Mr. Hannam. The almost perfect exemption of Gen. Harmon's crops from cockle, chess, &c. is doubtless one great reason why his wheats are so much prized for seed. By perseverance he has eradicated all such matters from his soils, and as in his hands wheat never turns to chess, &c. his crops are consequently clean. In this respect, as well as in the care and success with which he produces wheat, he has set an excellent example to American farmers, and for his labors he deserves and will doubtless receive an ample reward.

DR. PLAYFAIR'S LECTURE.

GRAZING AND FATTENING CATTLE.

At the request of the Royal Agricultural Society of England, Dr. Lyon Playfair recently delivered two lectures before that society, on the application of the principles of physiology to the grazing and fattening of cattle. By the kindness of our friends in London, we have been favored with reports of these lectures. The first was delivered on the 7th December, and we doubt whether we can occupy a page to better advantage than by giving this lecture to our readers:

Dr. Playfair stated that the object of the lecture was to point out in what manner the principles of physiology, especially those which had been lately developed by the chemical researches of Liebig, might be applied to the grazing and fattening of cattle. In the first place, he should endeavor to give a clear conception of what the principles of physiology were, that were involved in the feeding and growth of animals. Vegetables, in their growth, derive all their food from the mineral kingdom, principally from the air, which had been called a gaseous mineral; whilst animals derived their principal nutriment directly from the vegetable kingdom. Vegetables effected many chemical changes in the food they took up, animals few. Gluten and albumen are the nutrient principles of plants, and in chemical composition they are identical with the albumen of the white of an egg, of the muscle of an ox, or the blood of a sheep. By identity was not meant similarity, but positively the same thing. The albumen of blood, of muscle, and of an egg differed in physical but not in chemical characters. The composition of these substances, as analysed by various chemists from the animal and vegetable kingdom, as seen in the following table, prove their identity:

	Gluten. Boussingault.	Casein. Scherer.	Albumen. Jones.	Ox-blood. Playfair.	Ox-flesh. Playfair.
Carbon,	54·2	54·1	55·5	54·19	54·12
Hydrogen,	7·5	7·1	7·	7·5	7·89
Nitrogen,	1·4	15·6	15·7	15·72	15·71
Oxygen,	24·4	23·2	22·1	22·69	21·56

These analyses do not differ more than the analysis of the same substance. Plants, in fact, contain within them the flesh of animals, and all the animal organization does in nutrition, is to put this flesh in the right place. But animals take up with their food other constituents of plants which contain no nitrogen; such are starch, sugar, gum, &c. These are not nutritive principles; they do not assist in making the flesh of animals; and when animals are fed on these alone, they die. But animals possess a certain degree of heat, and their bodies have generally a temperature above that of the atmosphere—about 100 degrees of Fahrenheit's thermometer. Whence then comes this heat? From the burning of the sugar, starch, gum, &c. The air that animals exspire is carbonic acid, the very gas that is produced by the burning of wood or charcoal in a fire. Charcoal is carbon, and animals take in daily a large quantity of carbon in their food. It is the burning or combustion of this substance in the body that produces animal heat. In hot countries, animals on this account take less carbon. The food of the East Indian contains only about 12 per cent of carbon; whilst that of the Greenlander contains 70 per cent. The depraved taste of the Greenlander, who drinks train-oil and eats tallow candles by the dozen, might be pitied or wondered at; but it is necessary to his healthy existence. Another reason for animals acquiring carbonaceous food in cold climates is, that the air is more condensed, and the same measure contained a greater quantity of oxygen; that gas being the agent which, by uniting with the carbon and forming carbonic acid, gave out the heat. Strong exercise also demands a large supply of carbonaceous food, on account of the oxygen taken in during the hard breathing thus produced. Oxygen, when once taken into the system, never escapes uncombined, and would destroy the whole fabric of the body unless a fresh supply of material was given. Clothes, by keeping in animal heat, rendered less carbonaceous food necessary in order to keep the body up to its proper temperature. The following table exhibits the principles of food necessary for the two great processes of life—nutrition and respiration:—

Elements of Nutrition.	Elements of Respiration.
Vegetable Fibrine,	Fat,
" Albumen,	Starch,
" Casein,	Gum,
Animal Flesh,	Sugar,
" Blood.	Wine,
	Spirits,
	Beer.

If it were not for some power or force within the animal fabric, it would soon become a prey to the chemical action of oxygen. The force that withstands this action is vitality—a principle independent of the mind, and which constantly opposes the destructive chemical laws to which the body is subject. Disease is the temporary ascendancy of the chemical over the vital force. Death is the victory of the chemical force. A dead body exposed to the action of oxygen is soon resolved into its primitive elements—carbon, hydrogen, and nitrogen, in the form of carbonic acid, ammonia and water; and these are the elements from which plants again prepare materials for the living body. These remarks will explain many facts known to the agriculturist, and will assist him in insuring more certainly many of the objects of his labors. It is very well known that cattle do not fatten so well in cold weather as in hot. The reason is this: The fat is a highly carbonized substance, formed by the animal from its carbonaceous food. In cold weather, the carbon in this food is consumed in keeping up the heat of the animal, which is at that season more rapidly carried off. This is also illustrated in an experiment made by Lord Ducie at Whitfield. One hundred sheep were placed in a shed, and ate 20 lbs. of Swedes each per day; another hundred were placed in the open air, and ate 25 lbs. of Swedes per day; yet at the end of a certain period the sheep which were protected, although they had a fifth less food, weighed 3 lbs. a head more than the unprotected sheep. The reason of this is obvious: the exposed sheep had their carbonaceous food consumed in keeping up their animal heat. Warmth is thus seen to be an equivalent for food. This is also illustrated by the fact, that two hives of bees do not consume so much honey when together as when separate, on account of the warmth being greater; and they have less occasion for consuming the honey, which is their fuel. Cattle, for the same reason, thrive much better when kept warm, than when exposed to the cold. The cause of animals getting fat is, that they take in more carbonaceous food than they require for producing animal heat; the consequence is, that it is deposited in the cellular tissue in the form of fat. Fat is an unnatural production, and its accumulation is not necessary for securing the health of the body. When stored up, however, it will serve the body for keeping up its animal heat, and by this means its life, till it is all consumed. An instance is related of a fat pig having been kept without food for 160 days, having been kept alive by its own fat. Another element necessary to be taken into consideration in the fattening of animals is motion or exercise. Every action of the body—nay, every thought of the mind, is attended with chemical change; a portion of the deposited tissues are thus being constantly consumed. It is on this account that when animals are fattened, they are kept quiet and still. The cruel practice of fattening geese by nailing their feet to the floor, and of cooping pigeons and chickens before they are killed, arises from a knowledge of this fact. When prizes were given by our agricultural societies for fat, and not for symmetry, animals were strictly prevented from taking any exercise at all. Mr. Childers found that sheep which were kept warm and quiet, fattened much faster than those that were allowed the open air and action. It is very difficult to fatten sheep and oxen in July, on account of the flies, which stinging them, keep them in a state of constant motion. The Cornish miners, on account of the laborious nature of their occupations, consume more food than laborers with lighter work. During the late riots in Lancashire the poor unemployed operatives found out that exercise and cold made them hungry; accordingly, they kept quiet in bed, and heaped upon themselves all the covering they could find. Englishmen in the East Indies are obliged to take a great deal of exercise, because they will insist on eating and drinking highly carbonized foods; and the heat of the climate not allowing the escape of much heat from the body, they are obliged to take in by exercise the oxygen of the air, in order to destroy the carbon which would otherwise accumulate in the system, and produce liver disease. In the Scotch prisons, the quantity of food given to the prisoners is regulated by the kind of work on which the prisoners are engaged, the hardest workers having the most food. The reason of the flesh of the stag becoming putrid shortly after its death arises from the quantity of oxygen which it takes into its system during the hard breathing of the chase. A hunted hare, for the same reason, is as tender as one that has been kept for a fortnight after being shot. The reason is the same. In both cases the action of the oxygen on the flesh produces approaching decomposition—in the one, quickly; in the other, slowly. Bacon, on the same principle, was, at one time, rendered more delicate by whipping the pig to death. Epileptic fits produce great emaciation, on account of the violent action to which they expose the body. Lord Ducie has performed some experiments highly illustrative of the foregoing general principles, and which also indicated what might be expected from their application to the practice of grazing. 1st experiment. Five sheep were fed in the open air between the 21st of Nov. and the 1st of Dec.; they consumed 90 lbs. of food per day, the temperature of the atmosphere being about 44 deg. At the end of this time they weighed 2 lbs. less than when first exposed. 2d experiment. Five sheep were placed under a shed and allowed to run about, at a temperature of 49 deg.; they consumed at first 82 lbs. of food per day—then 70 lbs.—and at the end of the time had increased in weight 23 lbs. 3d experiment. Five sheep were placed in same shed as in the last experiment, but not allowed to take any exercise; they ate at first 64 lbs. of food per day—then 58 lbs.—and increased in weight 30 lbs. 4th experiment. Five sheep were kept quiet and covered, and in the dark: they ate 35 lbs. a day, and were increased 8 lbs. These experiments prove very satisfactorily the influence of warmth and motion on the fattening of cattle, and are still going on.

Dr. Playfair then stated that he should proceed to examine the different kinds of food of cattle. The food of cattle is of two kinds—azotised and unazotised—with or without nitrogen. The following table gives the analysis of various kinds of food of cattle in their fresh state:

lbs.	Water.	Organic Matters.	Ashes
100 Peas,	16	80½	3½
" Beans,	14	82½	3½
" Lentels,	16	81	3
" Oats,	18	79	3
" Oatmeal,	9	89	2
" Barley Meal,	15½	82½	2
" Hay,	16	76½	7½
" Wheat Straw,	18	79	3
" Turneps,	89	10	1
" Swedes,	85	14	1
" Mangel Wurzel,	89	10	1
" White Carrot,	87	12	1
" Potatoes,	72	27	1
" Red Beet,	89	10	1
" Linseed Cake,	17	75½	7½
" Bran,	14½	80½	5

A glance at this table would enable a person to estimate the value of the articles as diet. Thus every 100 tons of Turneps contained 90 tons of water. But the value of the inorganic and organic matters which these foods contained differed. Thus Mr. Rham states that 100 lbs. of hay, were equal to 339 lbs. of mangel wurzel. It would be seen by the table, that that quantity of hay contained 76 lbs. of organic matter, whilst the mangel wurzel contained only 34 lbs. One result of feeding animals on foods containing much water is, that the water abstracts from the animal, a large quantity of heat, for the purpose of bringing it up to the temperature of the body, and in this way, a loss of material took place. The mode proposed by Sir Humphrey Davy, of ascertaining the nutritive properties of plants, by mechanically separating the gluten, is unsusceptible of accuracy. The more accurate way is to ascertain the quantity of nitrogen, which being multiplied by 6·2, will give the quantity of albumen contained in any given specimen of food. The following is a table of the equivalent value of several kinds of food, with reference to the formation of muscle and fat; the albumen indicating the muscle-forming principle; the unazotised matters indicating the fat-forming principle:

lbs.	Albumen.	Unazotised matter.
100 Flesh,	25	0
" Blood,	29	0
" Peas,	29	51½
" Beans,	31	52
" Lentils,	33	48
" Potatoes,	2	24½
" Oats,	10½	68
" Barley Meal,	14	68
" Hay,	8	68½
" Turneps,	1	9
" Carrots,	2	10
" Red Beet,	1½	8½

The analyses in this table, are partly the result of Dr. Playfair and Boussingault's analysis, and partly Dr. Playfair's own analysis. The albumen series indicate the flesh forming principles, and the unazotised series indicate the fat-forming principles. By comparing this table with the former, it will at once be seen which foods contain not only the greatest quantity of organic matter, but what proportion of this organic matter is nutritive, and which is fattening; or that which furnishes living tissue and that which furnishes combustible material. In cold weather, those foods should be given which contain the larger proportion of unazotised matters, in order to sustain the heat of the body. Thus it will be seen that potatoes are good for fattening, but bad for fleshening. Linseed cake contains a great deal of fattening matter, and but little nutritive matter; hence, barley meal, which contains a good deal of albumen, may be advantageously mixed with it. Dumas, a French chemist, states that the principle of fat exists in vegetables, as in hay and maize, and that, like albumen it is deposited in the tissues unchanged. But Liebig regards fat as transformed sugar, starch, gum, &c., which has undergone a change in the process of digestion. This is why linseed cake is fattening: all the oil is squeezed out of the seed, but the seed-coat, which contains a great deal of gum, and the starch of the seed is left, and these are fattening principles. The oxygen introduced by respiration into the lungs, is destined for the destruction of carbonaceous matter, but there is a provision made for taking it into the stomach with the food, and this is done by the saliva. The saliva is always full of bubbles, which are air bubbles, which carry the oxygen of the atmosphere into the stomach with the food. The object of rumination in animals, is the more perfect mixing of the food with the oxygen of the air. This is why chaff should not be cut so short for ruminating, as for non-ruminating animals, as the shorter the chaff is, the less it is ruminated, and the less oxygen it gets. Chaff is cut one inch for the ox, half an inch for the sheep, and a quarter for the horse. Some might, in consequence of this, suppose that cutting food is then of little use; but when it is considered that rumination is a strong exercise, or that an animal will not be eating more food that is ruminating, it will easily be seen how cutting facilitates fattening. In order that food may be properly ruminated, it requires a certain amount of consistency and bulk; hence all watery foods, as turneps, and mangel wurzel, should be mixed with straw. The opinion is very correct, that an animal "cannot chew its food without straw." An important inorganic constituent of the food is salt; it is a chloride of sodium. Whilst the chlorine goes to form the gastric juice, which is so important an agent in digestion, the soda goes to form the bile, which is a compound of soda. The bile is, in fact, a secondary combination, by which the carbonaceous matter is brought in contact with the oxygen, in order to be burnt. It is thus that common salt becomes so important and necessary an article of diet. In the series of changes by which the oxygen of the air is brought in contact with the carbona-

ceous matters in the body, iron plays an important part, and is hence one of the necessary ingredients of animal food. There are two oxides of iron, the peroxide and the protoxide; the first containing a large quantity of oxygen, the second a smaller quantity; the first, on being introduced into the blood, gives up a portion of its oxygen to the carbonaceous material of the bile, carbonic acid and protoxide of iron being formed; these two unite, forming a carbonate of the protoxide of iron, which, on being carried to the lungs, gives off its carbonic acid, and the protoxide of iron absorbing the oxygen brought into the lungs by respiration, forms again a peroxide, which again goes into the circulation, and meeting with carbonaceous matters of the bile, unites with them, and produces again and again the same series of changes. The small quantity, then, of inorganic ingredients in the food, performs very important functions; and in the absence of them, animals would die.

Answers to Inquiries, &c.

USE OF ASHES.

"MESSRS. EDITORS.—I live in a region of country where ashes, and particularly leached ashes, may be obtained in almost any quantity. But we are ignorant of their value and the best methods of using them. I should be glad to learn through the Cultivator, their analysis, their effect on soils, the manner in which they act, and the soils most suitable for their use.

A WOODSMAN."

The constituents of hard and soft wood ashes differ in some degree, although the base or the alkali is the same. Dr. Dana has given the best analysis of ashes we have met with, and as it agrees in the main with those of Sprengel, Chaptal, &c. we shall condense it for this place. Ashes are in two parts, soluble and insoluble; leaching with water separates them. The average quantity of ashes from hard wood, soft wood, and wheat straw, and their soluble and insoluble parts in 100 parts of each, is as follows:

	Quantity of ashes.	*Soluble.*	*Insoluble.*
Hard wood,	2·87	13·57	86·43
Soft wood,	·0083	50·	50·
Wheat straw,	·044	19·	81·

Of the hard wood, 100 parts contain soluble and insoluble matters as follows:

Soluble.		*Insoluble.*	
Carbonic acid,	22·70	Carbonic acid,	35·80
Sulphuric,	6·43	Phosphoric acid,	3·40
Muriatic,	1·82	Silex,	4·25
Silex,	·95	Oxide of iron,	·52
Potash and soda,	67·96	Oxide of manganese,	2·15
		Magnesia,	3·55
		Lime,	35·80

Soft wood ashes differ from hard wood principally in having less carbonic acid in the soluble and insoluble parts, and more silex and oxide of iron in the insoluble. 100 parts of straw ashes show the following results:

Soluble.		*Insoluble.*	
Sulphuric acid,	0·2	Phosphoric acid,	1·20
Muriatic acid,	13·	Silex,	75·
Silex,	35·6	Oxide of iron,	2·50
Potash and soda,	50·	Lime,	5·80
		Charcoal,	15·50

Leached ashes, as commonly found, nearly resemble the insoluble of these tables, except that as the process is conducted less skilfully by the ashery man, there is always more or less potash left in the ashes after leaching. According to Dr. Dana a cord of leached ashes contains of phosphoric acid, 117 lbs.; of silex, 146 lbs.; oxide of iron, 17 lbs.; magnesia, 19 lbs.; carbonate of lime, including that added in leaching, 3,072 lbs., and potash 50 lbs. While unleached ashes belong to the alkalis, it will be seen that the leached ones must be classed with the carbonates.

The manner in which ashes act on soils is depending in a great measure upon their condition, whether they have been leached or not. Ashes act on soils chemically and mechanically. The potash contained goes to form silicates, hence the great effect of ashes on grass lands, silicates being essential to the grasses. They act chemically too in neutralizing acids existing in the soil, and producing a bad growth of weeds or plants not desired. Their mechanical effects are found in their rendering soils less tenacious, and rendering them more suitable for crops. The chemical effects of leached ashes are less than those of unleached, while from the additional lime they contain, their mechanical effects are greater. So far as regards the phosphates which exist in ashes, and which act so important a part in their action on soils, there is little difference between the leached and the unleached.

As to the soils on which ashes are the most valuable, experience and observation show that ashes are more efficacious on soils that are naturally dry, or have been made so by draining. On wet soils, leached ashes produce little or no effect, but we have found the best results on moist meadow land, by sowing unleached ashes over the surface at the rate of about 20 or 30 bushels per acre. It had the effect of partially destroying the mosses and coarse grass which occupy such lands to the exclusion of good grass, and it gave a very heavy crop for two or three years after its application. Old pastures on light lands are materially benefitted by leached ashes, their effect being on such soils but little inferior to gypsum, though a larger quantity must be applied. Some ten years since we applied a heavy dressing of leached ashes to about an acre of land in the center of a field, and the beneficial effect the last season, was clearly discernible in the pea crop grown on this field. This was not light land, but not wet. It has been twice well manured in this interval, yet the ashed land appeared to maintain its supremacy, feeling the manure as much as that to which no ashes had been given. The effects of ashes are unquestionably most valuable, and should always be made available where ashes can be had. Too many farmers are in the habit of selling them from their farms, a miserable policy, as no such manure should be allowed to leave the farm. Ashes are exceedingly useful in making compost from swamp muck or other vegetable matter, where an alkali is necessary to promote decomposition.

LIEBIG'S THEORY OF PLASTER.

OUR correspondent, JOHN MOXON, Esq. of Charlotte, N. Y. in a late note says—"I see in your Dec. No. a letter from Mr. Patridge, unsettling Liebig's decision on plaster and ammonia. Now this is one of the cases in which those who, like myself, are no chemists, want the Cultivator to step in and decide. Liebig's theory appears to me the only one as yet promulgated, on which a farmer could apply plaster understandingly; and if its correctness can be maintained the use of plaster can be very beneficially extended."

Without attempting to decide a question respecting which practical chemists differ, we may say that with the exception of Liebig's theory not satisfactorily accounting for the fact that plaster is not at all times and on all soils equally useful, as it should be if the theory were correct in all its details, we have found no system which agrees so well with the results we have obtained from experience as this. We do not know a chemist of eminence who dissents from the opinion that plaster absorbs ammonia; and what is more, the experience of all makers of compost or artificial manures agree with this supposition. Whether this can be done without effecting a decomposition of the plaster, and the formation of new compounds, we leave for chemists to decide. The theory of Liebig is the theory of farmers generally, so far as practice is concerned; and we advise all our farmers, while they allow chemists to settle points of mere theory among themselves, to use plaster liberally; confident that wherever applied to the soil, its effects cannot be otherwise than useful, although its beneficial influences may vary in degree.

BUTCHER'S OFFALS.

"MESSRS. EDITORS—I have the means of obtaining a considerable quantity of butcher's offals, or the blood, entrails, &c. of animals, and I should be pleased to learn the best method of converting it into a manure. In the ordinary mode of decomposition, the process is not only extremely offensive, but a large portion of the most valuable part must be lost. Will you be so kind as to give your opinion on this subject in an early No. of the Cultivator? INQUIRER."

The best method of converting the substances named by Inquirer, and all others of a similar nature, into manure, and to prevent the loss of their most fertilizing portion, the ammonia, is to make them into compost with such materials as will absorb and retain the gaseous matters as fast as they are liberated. The two substances best adapted for this purpose are charcoal and gypsum. Burnt clay is also a good article for this purpose, and it is frequently found in large quantities in the vicinity of old brick-kilns. But charcoal stands at the head of absorbent substances, and where charcoal dust can be had, nothing better can be used. A layer of mold, a layer of animal matter, a layer of coal dust or charcoal, and so alternately, the whole covered with mold, will, when decomposed, make a manure of the best kind. Plaster of Paris or brick dust may be substituted for the charcoal, but the effect will not be as efficient. Night soil mixed with charcoal or plaster, becomes an easily managed manure, and the escape of the ammonia is checked at once. Fish, which in some parts of our country is extensively used as a manure, might be made far more useful if composted in the way above recommended; and charcoal or plaster should always be mixed with common stable or hog pen manure, when the smell indicates that the ammonia is escaping during the process of fermentation. If neither plaster or charcoal are at hand, the animal remains may be mixed up with rich mold, pond mud, or peat, for the purpose of undergoing decomposition. The finer the offals and entrails are, or the more completely they are separated by the earths used, the better will the manure be. In Germany, according to Sprengel, animal matters, and animals that die of disease, are cut into very small pieces, strewed over the soil, and covered with the plow as soon as possible. This course is far preferable to that which leaves them above ground, a pest and nuisance, although their conversion into compost is the better method of disposing of them.

MR. GARNETT'S ADDRESS AT FREDERICKSBURG.

WE have been kindly furnished with a copy of the address delivered by Mr. GARNETT before the Agricultural Society of Fredericksburg on its 23d anniversary. It is one worthy of the subject and of the man; happily combining theory and practice, and illustrated by examples drawn from some of the best farmers in that part of Virginia, and in the state of Delaware, to which place he paid an agricultural visit last fall. Mr. Garnett every year conducts a series of experiments in some of the branches of agriculture; and the result of last year's we find detailed in the address before us. They relate to the planting and improvement of corn, to the culture of the "Fly-proof" wheat, and to the best time for cutting wheat. Mr. Garnett's experiments were adverse to the opinions entertained by some, that it is advantageous to leave suckers on corn. His experiment with his China corn, being the third year he has planted it, was favorable; and he concludes this variety of corn will be a valuable one. He states that it ripens early, being fit to grind by the middle of August. With us, its ripening is rather uncertain. He thinks the only title to "Fly-proof," belonging to the wheat experimented upon, "is that it recovers better than other wheats from the depredations of this destructive insect. It is also less liable to rust than other wheats, "except the two varieties of early May wheat." It is the same as that cultivated in Delaware and Pennsylvania as the Mediterranean wheat. The experiment to test the proper time for cutting wheat was made by five members of the Albemarle club. "Each cut three parcels of wheat; one perfectly ripe, another in the dough state, and a third in the milky state. The two last were dried in the shade, and then compared in both weight and count with the wheat which had been cut when fully ripe. The result was, that the wheat cut in the dough state had lost between five and eight per cent; and that cut in the milky state had lost between forty and fifty." The result of these experiments, so variant from the carefully conducted ones of Mr. Hannam, would seem to demand farther trials in this country, as it would seem to indicate to us that the extreme heat of our summers dries the early cut wheat so much sooner here than in England, that the maturing is arrested at once, instead of being gradually carried forward as there. Repeated experiments with potatoes has convinced Mr. Garnett that the Rohan potatoes are superior to most of our common varieties for stock, and far more productive; but that they are inferior as a table potatoe to the Mercers, Pinkeye, or Foxites.

We are unable to enter upon the interesting details given by Mr. Garnett of his visit to Delaware, and his notices of the improved agriculture among the spirited farmers in the vicinity of Wilmington. The beautiful Devons of Mr. Holcombe, and the immense peach orchards and fine Leicestershires of Mr. Reybold, attracted much of his notice. Mr. Reybold has on his farm 1000 Leicesters, which yielded at the last shearing an average of eight pounds to each fleece. The able remarks of Mr. Garnett on the subject of popular education are deserving a careful perusal. It is one which is everywhere too much neglected; and it is well for such men as Mr. Garnett to raise their voices in its behalf. It is a subject which cannot be too frequently or too earnestly enforced, as education is of vital interest in a country, the institutions of which are depending on the intelligence and virtue of its citizens.

FARMERS' CLUB.

THE first monthly meeting of the Farmers' Club, recently formed in this city, was held at the office of the Cultivator, on Wednesday, the 11th of Jan., and was well attended; gentlemen being present from the counties of Albany, Greene, Cayuga, and Schenectady.

Mr. Prentice presented for exhibition, a basket of Apples, among which were the following varieties:—Flushing and Esopus Spitzenburghs, Gilliflower, Newtown and Fall Pippins, Gloria mundi, Tallman Sweeting, Ribstone Pippin, Seek-no-further, R. I. Greening, Alexander, Pearmain, and Boston Russett; also some superior stalks of Celery.

Mr. Bement, presented specimens of Dairy and Rock Salt; and Mr. Caley, one of his Improved Probangs.

The question selected for this meeting—(the best method of [mechanically,] preparing the soil for the reception of seeds, roots and plants,)—was discussed in an interesting and able manner, each member giving his views, practice and experience, and resulted in the following resolutions:

Resolved, as the sense of this meeting, That deep plowing, so deep if possible, as to turn up annually a portion of the subsoil, and harrowing and rolling repeatedly, are essential to good farming.

Resolved, That fall plowing is beneficial to heavy soils—but not so to light soils.

Resolved, That the Club have little experience as to the value of subsoil plowing, but from the information derived from this discussion, they are of opinion that it is of the greatest importance to good husbandry, especially in a climate like ours, where we sometimes suffer from drouth and again are inundated with rain.

Messrs. NOTT, TUCKER, and WILSON, were appointed a committee to draft a Constitution and By-Laws for the Club, and to report at the next meeting.

The question selected for discussion at the next meeting of the Club, is—"The best method of making and preparing manures."

Messrs. PRENTICE, WILSON, and HILLHOUSE, were appointed a committee to report on the subject for discussion, at the monthly meeting of the Club in March.

The next meeting is to be held at the office of the Cultivator, on the second Wednesday of Feb., at 10 o'clock, A. M. Gentlemen from all parts of the state, are respectfully invited to attend.

WHITE CARROTS.—The N. E. Farmer informs us that B. V. FRENCH, Esq. of Braintree, Mass. raised the past season, over 22 tons per acre of White Carrots, on ground not particularly well prepared for roots. He attributes this great crop principally to the use of the subsoil plow on the land the previous season.

Original Papers from Contributors.

MANAGEMENT AND APPLICATION OF MANURES.

THE first great requisite to successful farming, is manure. In its manufacture and proper management, most of our farmers have yet to take the first step. Were these well understood and acted upon, the result would soon be an increase in the value of the farm products of this country of *many hundred millions of dollars*. Does this startle any one? Then let us make a brief calculation.

It must be familiar to most farmers, that our average products per acre, taking the country through, are not more than 15 bushels for wheat, 25 bushels for corn, 30 for oats, and 20 for barley. But agricultural societies and periodicals have sufficiently established the fact that these crops may be increased at least three fold. Wheat has often been produced here at from 40 to 50 bushels per acre; and three counties under the immediate influence of the Highland Agricultural Society of Scotland, have *averaged* 51 bushels per acre on land where but little was formerly grown. Corn is often raised at the rate of 100 to 130 bushels an acre; and with some cultivators, the annual product has for several years exceeded 100 bushels. These facts are established on undisputable testimony, and similar results have fallen under the direct observation of the writer and many others. Other crops have been increased at nearly equal rates. The chief cause of success in all these instances, is the fertility of the land, made so by manure. Now, the estimates founded on the census, make the amount of grain crops (excluding hay and roots,) in the United States, no less than 640,000,000 bushels; which at an average price of 40 cents a bushel, would amount to $250,000,000. If this amount were tripled, as it well might be by manure, it would be $750,000,000. But the real profit would be more than tripled, as large crops generally yield a much greater nett profit than small ones. The increase in stock and manufactured articles, inevitably resulting from this improvement, is not taken into the account.

This subject naturally divides itself into three parts. The first includes the *materials* for manure; the second, the best modes of *using them* in making manure; and the third, the best mode of *application to the land*.

Of MATERIALS, one of the most abundant and universal is the excretions of animals. Straw, peat or marsh muck, pond mud, earth, sawdust and leaves, and lime, ashes, and plaster, are mixed with it, and serve to retain its volatile and liquid parts. Other substances exist in smaller quantities, but may sometimes be obtained in abundance, as bone dust, horn shavings, woolen rags, dead animals and other animal substances, all of which are of great value as manure.

A great loss occurs in common practice in not retaining the volatile and escaping parts of dung; a large portion is suffered to wash and run away; and a still larger part escapes in vapor or gas. By employing muck or peat in large quantities in admixture, this is mostly prevented; at the same time, a part of the materials of the dung convert the peat itself into powerful manure.* E. Phinney of Lexington, Mass., and others, have found that two cords of peat and one of cow dung, mixed together, produce a compound as fertilizing as cow dung alone. Hence the greatly increased amount of manure which every farmer could make by large layers of muck or peat in his barn-yard, is obvious. But the successful use of peat does not always require dung. Ashes, leached or fresh, in sufficient quantity, will produce as good an effect. Sixteen bushels of good ashes are found to convert a cord of peat into excellent manure. The materials should of course be well intermixed, when they may be applied to the land in a few days. G. Robbins, of Watertown, Mass., an extensive soap manufacturer, has a very productive farm, which he keeps in a high state of fertility, without the use of a particle of barn-yard dung. He keeps 11 horses, 4 cows, and 100 sheep; the manure from which is all carefully saved and sold; while the refuse or spent ashes from his establishment, mixed with peat, constitutes the sole enriching material for his land. The peat is dug in the fall, and the ashes, one-third the bulk of the peat, is applied in the spring and well dug over; and the whole applied to his fields. It is asserted that the animal matter of a dead horse, is sufficient to convert 20 tons of peat into more powerful and lasting manure than stable dung. Dr. Jackson states that one barrel of fish will convert a load of peat into very powerful manure. The value of one cord of peat or swamp muck, is considered equal to the dung of one cow for three months. Yet there are thousands of our farmers whose lands contain almost inexhaustible beds of this precious material, which is indeed worth a hundred fold more than all the southern gold mines; but which lies year after year untouched, while meagre and diminished crops tell the poverty of the adjacent fields.

In a very large part of our country, peat may be obtained for most farms, within the distance of a few miles at farthest; and may be drawn in winter on snow. If the distance is considerable, it would be a matter of economy to get it out early in autumn in heaps to dry, after which it becomes so light that large masses can be drawn at a single load. Freshly dug peat contains more than five-sixths water; but even then is no heavier than stable manure. Where peat swamps cannot be drained, it will be necessary in nearly all cases to dig it out in the dry part of autumn. But where draining can be performed, this may be done any time during winter. From a good locality it may be shoveled out with great rapidity; a man will fill a cart in a very few minutes. The presence of muck in swamps is readily determined by thrusting down a sharp pole, which will enter common soil only a few inches, but will penetrate muck many feet.

Where peat cannot be obtained, there are substitutes. Pond mud has been applied to land, and has doubled the products. It would certainly be not less efficacious when mixed with barn-yard manure. The application of rich soil or even common earth, would greatly assist in augmenting the quantity. Straw, abundantly used, is not a bad substitute for peat; although greater time is required for the reduction of the fibrous parts. Saw dust can be procured in many places in large quantities, and forms an excellent material for the absorption of the richer parts of stable dung.

The application of lime, ashes and plaster, is generally made separately to land. Both lime and ashes have produced astonishing effects when applied to soils whose sterility results from *sourness*, which quality is generally indicated by the growth of sorrel and broom-grass. Lands in the southern parts of New-York, not yielding two dollars per acre a year, have by the use of 30 or 40 bushels of ashes to the acre, yielded the second year a nett profit of more than fifteen dollars. Dr. Jackson states that blowing sand, or a pine barren, scarcely producing 10 bushels of corn to the acre, by a judicious application of ashes, has produced 40 to 50 bushels. Similar effects have been produced by dressings of lime, and shell marl on the worn out and almost totally barren lands of Virginia. The use of lime on fertile lands, is in most cases highly beneficial, but not so striking, as a considerable increase in a crop already large, is not at once perceived. This has induced some to suppose that lime is of little or no use on rich soils; where the experiment has not been submitted to the test of accurate measuring. The quantity of lime per acre, may vary from 50 to 500 bushels. If *hot* or *magnesian* lime, such as is generally used in the vicinity of Philadelphia, where lime has been extensively used to great profit, it should not exceed 100 bushels an acre. But land is not injured by common lime, applied much more copiously. The writer has known instances where it has been administered at the rate of 400 bushels to rich soils with decided benefit.

But in all cases, lime and other manures of its class, need thorough intermixture with the soil. Different experimenters state that its full effect is not produced until the third or fourth, or even the seventh year; which is doubtless owing to the fact that thorough intermixture has not taken place sooner. Failure often attends inattention to this particular, both in the use of lime and ashes. To facilitate the spreading of lime, it is generally covered with earth in small heaps until pulverized by slacking. It is not less efficacious when slacked, as it is obvious that a thin coating on the ground would in any case be very speedily saturated with carbonic acid. Hence old refuse lime from kilns, if not mixed with stones nor too much clotted to spread, and shell marl, are as good as any.

Ashes, applied to grass lands, in most cases greatly increase the crops, and is one of the safest and most certain ways to apply it unmixed.

But although lime, plaster and ashes are generally applied separately, a decided improvement consists in using them in mixture with barn-yard manure. They not only assist in retaining the valuable parts of the latter, both before and after spreading on the soil; but the thorough previous intermixture prevents those uncertainties which often result when they are applied alone. Bone dust, and other animal manures, are also most economically and safely applied to the dung heap. It is here that a great improvement in the use of these powerful substances is to be made.

Nearly all animal substances form very active component parts of manures. Hence fish, and all dead animals, animal matters from slaughter houses, hair, &c., should never be suffered to waste. Covered with peat or earth, and a portion of lime or plaster, the volatile parts will be absorbed, little or no offensive odor will pass off, and manure of great power will be produced, when the decomposition is complete. It is stated that sixteen thousand dead horses are thus yearly converted into manure in Paris and its vicinity.

A most important material for manure, but generally entirely neglected, is night soil. Poudrette manufactured in the cities, consisting chiefly of night soil with peat, plaster, and lime dried, is of such efficacy, that one bushel is equal to a load of stable dung. The experiments of the writer fully corroborate this; and the mode he adopts is the following: A plank trough is placed under the privy, and frequent applications made of plaster, lime and ashes, (an addition of peat would be still better,) and when needed, it is drawn off, and applied either directly to the land or to the dung heap in the barn-yard.

The PROPER USE and MIXTURE of these materials forms a most important part of the business. Stable dung is the chief material used by farmers; and the best mode of saving and using it, is one of the first requisites in good farming. The proper construction of barn-yards, hence becomes a matter of great consequence. A convenient plan for common use, is the following: A depression is made in the center of the barn-yard, two or three feet deep, and from two to three rods in diameter; the adjoining stables being conveniently situated, so that all their contents may be daily wheeled and thrown into it. This depression should be water-tight, which will be the case if made of compact clayey soil. It would be better if paved with stones, the interstices being filled with clay; or still better if they could be covered with a coat of water lime mortar. In the latter case, they would need to be kept covered in winter with manure, to prevent the mortar freezing and cracking. This basin serves to prevent the escape of all the liquid parts.

On the bottom of this, should be spread a layer of peat from six inches to one foot thick, if it can be obtained; and if not, pond mud, rich earth from muckey places, or common soil; or even a thick layer of old straw. On this, the cleanings of the adjoining stables, where litter should be freely used, is daily carried and thrown by a large boxed wheelbarrow, and the frequent treading of cattle's feet intermixes it well. Successive layers of peat or soil should be applied during the season. Peat, if piled in a large heap, will not freeze so much as to prevent frequent application in winter. Into this heap also, all refuse animal matter should be thrown, the contents of privies be drawn, and occasional thin layers of ashes, lime and plaster, be spread, so as not to become accumulated in masses, but evenly mixed through. If this basin becomes too wet for cattle to walk across it, more straw and peat must be used to absorb the liquid. Plaster should also be daily strewed in the stables, and it will prevent the escape of much volatile manure.

Thus, by a free use of these materials, but more especially by a copious application of peat, muck and straw, it is believed that the manure manufactured by most farmers, would be increased at least ten fold.

The great labor, will strike many as a strong objection; but let them remember that this is laboring to some profit—far more so then scratching over barren fields and raising scanty crops.

One great neglect, even in farmers who otherwise take good care of manure, is suffering the urine of animals to waste. The preceding plan will save all from those in the yard. Those in stables should also be attended to. No stables should have plank floor, unless it can be made water tight. In this case, the urine is to be conducted in troughs at one end of the stables, into pits filled with peat or muck. The urine of a single cow for one winter, according to Dana, is sufficient to convert 20 loads of peat into excellent manure; and one peculiar value of this manure, is that it contains no more fibrous matter than the finest compost. It is generally best, however, to have earth floors, covered first with a thick layer of peat, and with another thick layer of straw. Sometimes loose floors are taken up once or twice in the year, and a bed of peat spread beneath.

APPLICATION OF MANURES. Common stable manure loses a large part of its value by fermentation. When it becomes a soft cohesive mass, one-third or one-half of its good qualities is gone. Hence when applied fresh to land and immediately plowed under, its volatile parts are absorbed by the soil and loss prevented. The experience of many has led to a different result, who suppose that fermented manure is best. This is because the latter admits of thorough intermixture. But fresh or long manure is usually spread in large lumps, which are often imperfectly covered, and lie in large masses instead of being incorporated with the soil. Stones and unburned bricks thrown together, would form a poor soil indeed, but when ground down to fine sand and clay, they constitute a mixture like the basis of our richest soils. Thorough intermixture is the great leading principle in all chemical operations, and it must not be neglected in this. The following experiment by David Thomas of Cayuga County, fully corroborates this position: He says, "in the spring of 1840, I had no ground for field beets, but a small lot where corn had grown for two years in succession. It was unfit for such a crop without manure; and I had only fresh manure from the stable, which has long been considered most unfavorable to the beet. My necessity, however, prevailed against opinion, and I took the responsibility. From each line where the beets were to grow, two furrows were turned so as to leave a wide dead furrow. Into this, manure was thrown from the wagon, each forkful touching the one just behind it, till the row was completed. It was well covered by turning two furrows together over it, which *held it down* while the harrow was passing four times in succession, breaking, pulverizing, and mixing it intimately with the soil. Again, two furrows were turned together over the row, and the harrow passed twice more, in all six times. By this process, the ground was reduced to a fine tilth; and if there were any better beets in the country, I did not see them."

Hence also, one coat of manure plowed deep, or one coat applied as top dressing, is only partially efficacious. Hence also, grass lands made rich by the culture of previous crops, are better than those made so by top dressing alone. A recent experiment of the writer, exhibits this principle in a strong light. Land not fertile, was covered with a good coat of fine manure, and well incorporated with about three inches of the upper surface by repeatedly passing a cultivator. Ruta Baga was sown on one part, and Norfolk turnep on the other. For the first six weeks they made as rapid growth as the best turneps in the country; but after that, their growth almost ceased, and there was not one quarter of a good crop. Hence when such top dressings are applied, there should be a sufficient quantity of manure previously turned in deeper to carry on what is begun; and hence also, manuring in hills can only be of partial advantage.

J. J. THOMAS.

Macedon, N. Y. Dec. 1842.

*The limits of this essay preclude the chemical explanation of these various operations; and facts only are given which have been well established by experience.

THE IMPROVED CULTURE OF COTTON—No. II.

MESSRS. GAYLORD & TUCKER—"Condition and circumstances," says the Cultivator, "should not control us. We should mold them to suit our wills." A truly laconic sentiment this; the grand importance of which I have well and long since considered. And though I acknowledge to the fullest extent the force and justice of such decisive resolve as a governing principle, and regard it as the very "*sine qua non*" to certain success, in the practical operations of the agriculturist, yet he must be a Lacedemonian indeed, over whose stern prowess circumstances may not occasionally exercise a leeward influence.

Engagements of an urgent character, and without my control, have caused the delay of this number, which, with the advanced stage of the season, render it necessary that I change the order of my original design, as previously indicated in communicating with you upon "the improved culture of the cotton plant;" and instead of giving you the principles and philosophy of the system, &c., according to my views of the peculiar characteristics of the plant, under the various circumstances of soil and culture, I propose devoting this paper to "the details of the modus operandi by which my experiments have been conducted, together with the character and quality of the soil, &c." for the timely convenience of those kind friends, and other gentlemen, in the cotton region, friendly to agricultural economy and improvement, who may have exercised only faith enough in the system, *acting wisely*, to make the experiment.

In commending this improvement, gentlemen, to the planting interest of the country especially, and previous to going into the details of its practical application to the culture of cotton, permit me to call the considerate attention of your readers in the cotton region by a few brief remarks to two very obvious facts that exist, palpably destructive to the best interest of the cotton planter—the direct effect of the present system of culture. In the first place, I remark, that under the system of the country, the maximum production of cotton, *at a ruinous cost*, has equaled that of its consumption; which is generally admitted, I believe, to be the principal cause of the low prices of the article, which general admission also agrees that such prices pay *very little*, if *any profit*, upon the immense capital vested in its production. I remark, again, upon the disproportionately large amount of *inferior and poor* cotton thus produced, as compared to the good, which, upon the authority of both merchant and planter, may be safely set down at from three to four bags of poor, to one bag of good cotton. This fact, so abhorrent to the natural order of all vegetable perfection, produces a state of feeling and an influence in the cotton market prejudicial to the real value of cotton, and consequently to the interest of the planter. These are plain matters of fact, and must have excited the attention of planters in some degree, especially the latter, which I suppose to have existed to a very injurious extent for at least the last quarter of a century.

To meet both these difficulties, and to convert them in a direct reverse ratio, into sources of profit, constitute but a part of the advantages which this improvement offers to the cotton planting interest of the country. It proposes to meet and obviate the former difficulty by producing, as previously stated, the present and necessary amount of cotton, with but *one-third* the cost or capital now engaged in its production; furnishing thereby to the planter a *direct and nett profit* of over 100 *per cent* upon the present market price. To illustrate and prove this position will be a part of the object of another number. Again; by subjecting the cotton plant to this system of improvement, which favors its natural arborescent growth, and the more perfect development of its staple and great proflicacy, the latter difficulty is obviated and the preponderance changed, as clearly shown by my experiments, in favor of an infinitely superior staple: thus the planter receives nearly an entire crop of strictly prime cotton, upon the influence of which the market price becomes established, and its tendency favorable to the planting interest. I have not room here to do more, at present, than merely to call attention to these facts. I now proceed to the immediate object of this number.

This improvement, when it shall have attained its highest state of perfection, contemplates the "*system of rotation*" in planting, under which the land designed for cotton lies the previous year in the state of fallow, which is found by experience most favorable to the growth and fruitfulness of the plant. I commence the preparatory operations for planting about the 1st of March, by spreading upon the land *broadcast* two to three hundred bushels of manure per acre,—light stock yard and stable compost. I then run off the land in rows of three feet with a scooter plow, opening a good furrow some three to four inches deep; this done, I take a large size shovel plow and cross the scooter furrows by rows, running at right angles, of five feet wide. I am now prepared to commence manuring in the hill, having first ascertained that I have 2940 hills on each acre, which will require, by giving each hill a half gallon of manure—same kind of compost—184 bushels nearly, which I haul on the land in a cart, first graduated to a certain number of bushels, and with spades likewise prepared for the purpose, I deposite the requisite quantity of manure in each hill. By this means, which in practice will be found simple and expeditious enough, I give four to five hundred bushels of manure to each acre—*an infallible insurance* for 5000 lbs. of a superior staple per acre. As the manure is placed in the hill by rows, the wide way, a short distance in advance, a *good plow hand* follows with a turn plow, which should run into the soil from *six to eight inches deep* at least, and turn well, with which four furrows are thrown together on each row: thus fixing the half gallon of manure in each hill, entirely within the *region of constant moisture*. This gives me a fine, large bed, and well broke, to lie until at or about the first of April, when the cotton seed should be planted. This is done by first opening the bed as shallow as possible, with some instrument such as that described by M. W. Philips, Esq. in the March number of the 9th vol. of the Cultivator. This I prefer to any other instrument of the kind I have ever yet seen, since its depth of furrow may be graduated to a positive certainty so as to avoid disturbing the manure in the hill; it should not be opened out deeper than one inch. The bed thus opened, and the seed previously rolled in leached ashes or sand, which answer very well, though I prefer a compound of two parts of ashes to one of common salt, made moist with water; the seed, well rolled in this, are carefully dropped over the manure. Eight to ten seed in a place will answer to secure a stand. There will be no difficulty in dropping the seed over the manure in the hill, when it is recollected and observed that upon the unbroken space of some two feet between each row, the scooter furrows will be found an unerring guide to the manure in the bed at distances of three feet. The seed thus dropped I prefer to have covered with a hoe, *lightly and carefully*; bearing in mind this golden truth, that "a crop well planted is half made." Immediately after planting, the middles or unbroken balks should be plowed out. The crop of cotton thus planted, which should not exceed *three to four acres* to the hand, may be performed in good time and well done. In a few days, say nine to twelve, the cotton will be up, presenting a most healthy and thrifty appearance. The next operation to be performed, as early as possibly convenient, is to plow out the middles *well*, the wide way, with a good shovel plow, having first run around the young plant with a scooter plow. The hoe hands follow and thin the cotton down to two stalks, giving it a small quantity of soil. This operation *well done*, the plant is at once placed beyond all danger, since its tap-root will now have taken such hold upon the manure below as to enable the plant to outstrip either grass or weeds, having yet to spring up.

Under this treatment, the *time-consuming* and worse than useless operations of *bar-shearing*, *scraping* and *chopping out*, are saved, as much to the benefit of the tender plant, as to the interest and economy of the planter, in despatching the *hurry and push* at this stage of the crop; and at the conclusion of this first working, I have my cotton growing off and doing well. I have now no further use for a plow in its subsequent culture, but use the *sweep*,—a kind of horse-hoe,—I call it a sweep in the absence of a more appropriate name, an idea of which, may be had from the subjoined figure.

This instrument is easily made by any blacksmith, by laying the wings *a. b.* and *a. c.* upon the point of a scooter *d.* in the form of an isoseles triangle, which is fastened upon the chip of a shovel plow stock, by a heel pin, in the same manner you would a shovel. From the tip of the wing *b.* to that of *c.*, it should be 2 feet, forming a kind of *horse-hoe*, by which a row is swept out at 3 furrows. This should be so curved and graduated upon the stock as not to go into the soil deeper than 1 inch, and as much less as possible, to enable it to cut the young grass and weeds that may be springing up. The great and singular advantages of the sweep over all instruments of the plow, harrow, or hoe kind that I have ever used, are these,—that it will *kill* a greater quantity of grass and weeds in a given time, and *do less injury to the surface roots* of the plant, *so essential* to its *progressive* prosperity. The hoe-hands following this instrument, thin the cotton to a stand, *one stalk* in a place, and draw up a small quantity of soil to the standing plant. The entire subsequent culture is performed with the sweep and hoe, which should simply scrape and pulverize the surface, so as to kill any grass and weeds that may appear, and allow a *free circulation* of atmospheric air to the fibrous roots of the fruiting stalk, requiring at this *critical period* all the aid and nourishment that culture, soil and atmosphere can afford. By the first of July my cotton stands from 5 to 6 feet high, and I have it topped by the 10th at farthest, after which I run the sweep once more through it, and the hoe if necessary, to remove any grass, that may have sprung up immediately about the stalk. After this, and by this time frequently in places, the cotton will become so much interlocked, and the ground so shaded, as to keep down all other vegetation—yet it may be found necessary again to chop about in places with the hoe, when the cotton may not have locked so early. This should be invariably attended to. This brings us again to the season of harvesting the staple.

Let no planter prejudge and reject this system, upon the score of simplicity, supposing the process too simple to accomplish the object proposed; first, act wisely, make the experiment, and try it. Strictly follow this plain and simple process, and if the land does not reward your pains-taking, with *five to six fold the quantity per acre*, of a *superior staple*, than has at any previous season been taken from it, in its natural state, I will present the experimenter with *one bushel* of my *improved seed*, with which to perfect the experiment. At another time I propose devoting a paragraph to the importance of *selecting and improving* cotton seed.

It will be observed that manuring constitutes a large item, in this system of improvement, a source of revenue too much underrated by planters, and consequently too much neglected, because the subject requires a little extra attention—which attention is so essential to the prosperity and well-doing of a farm. Nor, gentlemen, have I seen any thing better said, or more true, than I find in the sentiment, under the head of "*a few queries*," in the last December Cultivator, where you remark, to the planter and farmer: "In your manures is your *gold mine*, more valuable than any of the Carolina ones, and you should be anxious to increase them accordingly." But I hear some planters say—"it is impossible to produce so much manure"—this is, however, the result of inexperience, and the want of *determination*. I am entirely convinced, from my experience in making manure, that it is not only practicable, but a perfectly easy task, to prepare upon every plantation in the cotton region, great or small, 1500 *bushels* of an excellent article of compost, per annum, to the hand—at a cost of less than two cents per bushel—by the assistance of the stock of horses, cows and hogs, upon properly arranged lots. This is done by having the lots well littered, by throwing in pine straw, in large quantities and frequently, or oak leaves, where the pine straw is not to be had, with cotton and corn-stalks, &c. and occasionally haul and scatter upon the litter, a few loads of muck or marl, one or both of which may be found on or near every farm in the country; upon these lots, pen and feed your stock every night. The manure thus prepared, should be collected in pens or pits, three or four times during the year, after heavy falls of rain, and the lots replenished with pine straw, &c.—by this means a very large amount of manure is collected during the season, and that too, at an inappreciable cost. Again, we have another difficulty; there are but few persons who believe that pine straw can be converted into manure; for the benefit and information of such, who may read this, permit me to quote a single sentence from Liebig's celebrated work upon agricultural chemistry: "The bark and foliage of oaks contain from 6 to 9 per cent of potash. The needles of firs and pines, 8 *per cent*." But it is not on account of the potash exclusively, that I prefer pine straw to all other vegetable matter in the preparation of manure;—since it possesses another invaluable quality above all others, in absorbing the juices of the manure, which are thus saved from evaporation, and readily applied to the land. I doubt not but a single year's experience will convince every intelligent planter of the innumerable advantages of this improvement, and its perfect adaptation to the culture of cotton and other crops.

I will now close this number by a very few remarks upon the character and quality of the soil upon which my experiments have been conducted. It is high ridge land, readily recognized, and its quality distinctly understood, in our southern country, under the name of "*forked-leaf, black-jack, pine-barren*," a deep, porous, sandy, superstratum, lying upon a tolerable good clay, at a distance of 2 to 3 feet below the surface. A true picture to nature, and naturally poor enough. This land, under the treatment above detailed, grew my cotton, from which I have gathered a greater number of pounds per acre, (indeed almost double,) than I have ever seen recorded, is in its natural state, inferior to the average quality of cotton land, by at least one half. I might refer you, if necessary, to more than one hundred gentlemen, planters from Georgia and Alabama, who have examined my experiments carefully, and several of them, at various stages of its growth, and with one general consent, pronounced it a fair test, and a great improvement. I have, from several stalks that grew on the three acres, in the proper places, taken 3¼ to 4lbs of cotton, *carefully weighed*. In the perfection of this improvement, yet in a state of great crudeness, when every stalk upon the acre, (2,940,) *shall mature equally well*, what may I *reasonably* calculate to gather?

"————Nil desperandum,
Possunt quia, posse videntur."

N. B. CLOUD, *M. D.*

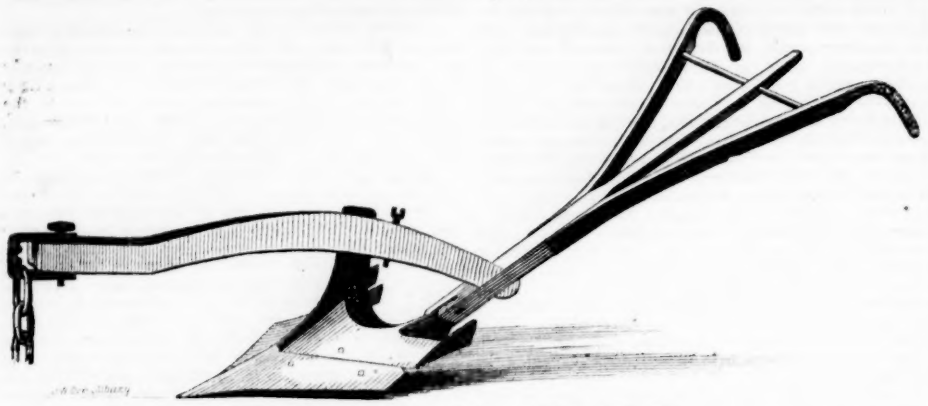
Planter's Retreat, Ala. Dec. 26, 1842.

SUBSTITUTE FOR THE ROLLER.

MESSRS. EDITORS—One of our farmers, Mr. John A. Merselis, uses the following article, instead of a roller, with good effect. He takes a slab, or outside cut from a log, two or three inches thick, nine inches wide, and about seven feet long; a rope is fastened in each end, and then by means of the clevis, he fastens his team to the middle of the rope. If the driver is a heavy person; he uses the flat side down next the ground; if he is a light person, the round side down; going over the field several times, until the ground is sufficiently pulverised; the driver standing on it, to keep it in close contact with the ground. By rubbing over the ground, it pulverises it thoroughly. The past season, I saw two of his fields; one planted with corn, on our Mohawk flats, which looked like a bed in a garden; the rows of corn could be seen across the field, when only an inch or two high. The other was upland, clay and slate gravel, sown with oats, which was equally smooth. I believe when he uses it, he does not previously harrow. He invented it to cover marrow fat peas, which, by harrowing, he was unable to cover. He even uses it to cover his potatoes after planting them. Respectfully yours,

CHARLES H. TOMLINSON.

Schenectady, Dec. 30, 1842.



Langdon's Horse-Hoe or Cultivator Plow.—(Fig. 15.)

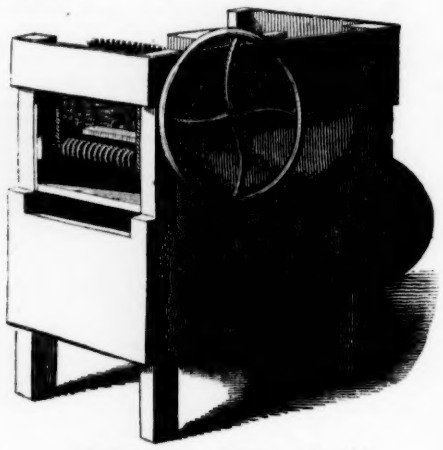
IMPLEMENTS OF HUSBANDRY.—No. II.

It was my intention to have headed this No. with a description of Murray's Corn and Cob Grinder, which was exhibited at the Fair in Sept. last, and to which was awarded the Society's premium; but having failed to obtain a drawing of it, (although I addressed a note to the owner early in Jan. requesting him to furnish one,) must postpone it to a future number.

There were only three Corn-Shellers exhibited at the Fair of the State Agricultural Society,—one by Mr. Thorburn, Albany, Adriance's—one by Geo. E. Waring, Stamford, Conn.—and one by John A. Whitford, Saratoga Springs. A description and pictorial representation of Adriance's machine, with my opinion of its merits, may be found in Vol. IV. p. 93, of the Cultivator. I have had it in use until last summer, and have had no reason to alter my opinion on the subject. Waring's machine I have never seen in operation, but from those who have had it in use, I have always heard it highly commended.

The Corn-Sheller has always been considered a very useful and labor saving machine. The shelling of corn by hand, even with the aid of the handle of the frying-pan, is a tedious and painful operation, and at present, I believe, entirely out of date. The treading it out with horses, or beating it out with the flail have their disadvantages, and are not practiced where corn-shellers can be had.

It is now more than twenty-three years since the corn-sheller was first introduced, and very little improvement on the principle has been made until within a few years; in fact Judge Buel preferred one of the old machines, (Harrison's,) which he used during his life time.



Whitford's Corn Sheller.—(Fig. 16.)

The machine from which the above drawing was taken, (the tops and posts removed,) is the invention of J. A. Whitford, of Saratoga Springs, for which the Society's Diploma was awarded by the committee on this description of implements.

The principle appears to be new, and as I have one of them in use, I can speak advisedly. It shells as clean as any other machine, and has the advantage of depositing the cob on one side and the corn at the back-side, like a common fanning mill, into the half bushel, in good order for the mill or market, the chaff being completely blown from it by the fan, as is seen in the end of the above figure; thus saving the labor of passing the corn through a fanning mill after shelling, to prepare it for market. This machine differs from others, as the principal sheller for separating the kernels from the cob is a frustrum of a cone, (which is imperfectly shown in the above cut, in front and at top,) made of cast iron staves lying horizontally, and is surrounded with teeth set in spiral rows. The lower oblique sheller is placed below the main sheller, and nearly touching it, and is composed of a series of small wheels armed with teeth on their peripheries, placed about half an inch apart, leaving a space between them of sufficient distance to admit the bars of a spring concave bed-plate projecting downwards, leaving a space between it and the sheller sufficient to allow a common sized ear of corn, and to keep it between and against the two shellers, where it is held until the corn is completely stripped from the cob by the simultaneous movement of the shellers—the cob escaping at the discharging aperture, and the corn falling through the space which is met by the current of air from the fan, which blows the chaff out at the front.

Without the fanner it requires about the same power as the common machines, but to use it to the best advantage, it should be run with power. They are for sale at the Agricultural Repository of Mr. H. Warren, River-street, Troy. Price $20.

Among the new implements exhibited at the Fair, none seemed to attract the attention more, or appeared to meet the views of the multitude, better than the horse-hoe or cultivator plow, (Fig. 15,) exhibited by B. Langdon, of Troy.

It affords me great pleasure to have it in my power to speak of the merits of this machine from experience, having used one the past season in my corn. My corn ground was laid off in squares planted in the corners, leaving the hills three feet apart, which enabled me to run the horse-hoe both ways. When the soil is tolerably loose it penetrates from two to three inches; the edges being sharp, cut off the weeds, which with the soil pass over the top of the inclined share which rises 3½ inches above the cutting edge of the share, leaving the soil very light and loose. The cutters on the upper section of the share are useful for pulverizing the soil. The breadth of the share from point to point crosswise, is 17 inches, which I find sufficiently wide for rows at 3 feet distance, for it loosens and breaks the soil beyond the reach of the share. After passing through the corn both ways, there is little left for the hand-hoe to do. It is a very efficient machine, and I have the testimony of a number of farmers and gardners who have used it, and all speak in the highest terms of it. I did not try it for digging potatoes as my crop was on a side hill, but those who did try it say it exceeds anything for that purpose which has yet been introduced. When used for earthing up potatoes, the upper sections of the share with the cutters, are removed and wood boards are substituted, which is readily done by means of one screw bolt through the upright part of the share.

Since the foregoing was written, Mr. Langdon has shown me one of his horse-hoes embracing an improvement. By referring to (Fig. 15) you will perceive the improvement consists in extending the cutters beyond the share, by which means the soil will be left very loose and well pulverized. The point of the share, instead of being square or chisel shaped, as heretofore, is now tapered to a point, by which means the roots and weeds which formerly catched on the point and annoyed the plowman, will now be avoided.

It is not generally known, I believe, that Mr. Langdon was the inventor of the horse power ferry-boats, and I will venture to say, one of the most useful discoveries for that purpose, of the age. What kind of an appearance at the present time, would one of the old fashioned scow ferry boats, propelled by human power with immense poles, at a snail's pace, make along side of one of those? In fact it would be necessary to have enough of them to reach nearly across the river at Troy to accommodate the present travel, notwithstanding they have a bridge near by.

I find I am digressing; I will now return to the horse-hoe. The best and most substantial evidence of the estimation in which this implement is held by those who have seen or heard of it, is the amount of sales and the number of orders already received, exceeding the most sanguine expectations of the proprietors. I was informed not long since by Mr. L. that he had received an order for twelve, to go to Chicago or Wiskonsan. The proprietors are induced to put them at the lowest possible price; to meet the pressure of the times, and offer them at $8 complete. They may be obtained of H. Warren, River-street, Troy, or by addressing the proprietors, J. C. & B. Langdon, Troy, N. Y.

Three Hills Farm, Jan. 1843. C. N. BEMENT.

NOTE.—In the first number I have stated the price of Baldwin's Corn and Cob Crusher, to be $85. Mr. Thorburn informs me it is only $65.

WINTERING STOCK.

MESSRS. GAYLORD & TUCKER—There is no subject, perhaps, connected with farming, of more consequence than the care and management of stock; and I know of none that in general is so much neglected, or which receives so little attention.

I propose making a few remarks on the manner of wintering stock in this part of the country; and although some of the practices which here prevail may be unknown in your vicinity, yet I trust that a notice of them may not be regarded as useless.

One of the first things which strikes the attention of a New-Englander on coming to the West, is the great waste of grain and fodder in the feeding of animals; and the remark is frequently made, that if these articles of food were used with the same economy and judgment that is practiced by good farmers in the "land of steady habits," there might be kept from twenty-five to fifty per cent more stock than there is now. This remark is unquestionably correct in a general sense, though it should be received as subject to some exceptions.

The manner of wintering cattle varies somewhat in the different sections. In the great Indian corn districts, they are fed chiefly on the fodder of that grain; seldom, or never eating hay. The corn is sometimes husked from the stalk in the field, (the stalks not being cut,) and the cattle are turned in to eat what they choose, or whatever hunger compels them to eat. This custom is liable to many objections. The cattle are commonly allowed to range in the "stalk-fields" at all times, without regard to the state of the weather or the condition of the land. The fluctuation of the climate during the winter months causes frequent freezing and thawing of the land; and when it is muddy or soft, the tread of the cattle is very injurious; it makes the soil into mortar, which, when dry, becomes as hard as a brick, and plants cannot grow in it. Besides, much of the fodder is lost by being trodden into the earth. But perhaps as great a waste as any attending this custom, is the loss of nutritious matter in the fodder by being left to become totally dead; sometimes killed by frost, and the *saccharium* of the stalk (probably its principal nutriment,) wholly dissipated. In this state, it can do little more than barely sustain life. The bark and wood of trees, if the animals can masticate them, will do as well. I have many a time seen animals kept in this way so miserably poor and weak as to be hardly able to lift their feet out of the mud and crawl from one bunch of stalks to another.

A better mode of managing corn fodder, and which the *best* farmers greatly practice, is to cut it up and shock it as soon as the corn begins to harden. It may be cut and well saved so early that the greenness and sweetness of the stalk and leaf will be principally retained. The difference in the value of fodder thus saved and that which is suffered to dry up or be killed by frost is great. If cows that are fed on the latter give any milk it is thin and watery. Butter can scarcely be made from it; if any is produced, it is frothy, crumbling, colorless and worthless, while the cows are as poor as skeletons. On the other hand, cows fed with the green fodder give rich milk, which, if properly managed, will yield butter of nearly as good consistence, color and quality, as if the cows were fed on grass.

But even when fodder is saved in the best manner, a great waste is frequently allowed in consequence of its not being properly fed out. It is too often thrown into the mud, or on to land that is too wet and soft for cattle to tread on. It can be fed to the greatest advantage in mangers, suitably arranged around the barn-yard, where all is consumed that is eatable, and the remainder, if the yard is rightly formed, is converted into good manure. But when the number of cattle is very great, it may be difficult to provide for them all in the barn-yard; and on grounds of almost inexhaustible fertility, as are some of the alluvial lands in the west, there is less occasion to feed in the yard for the purpose of making manure. Instead, however, of feeding on land which would be trodden up and injured by the cattle, a dry and sheltered spot should be selected, with (if possible,) a firm blue-grass sward, which will bear the tread of cattle.

Hay is generally worse managed in this part of the country than I have ever known it in other places. It is commonly allowed to get too ripe before it is cut; being often entirely dead before it is touched with the scythe. But whatever may be its state of ripeness, it is suffered to lie in swath after it is mowed, "rain or shine," till the farmer is ready to put it up. Sometimes he gets ready the first day and sometimes he is not ready under a week. But when the time comes for stacking, it is put up whether it be wet or dry. The consequence is, it "spends well," as they say; for the animals must be driven to starvation before they will eat it; and sometimes they cannot then be induced to eat enough to keep the breath of life in them.

Those only who have had the experience of feeding hay cut while it is in blossom and properly dried without being wet by either dew or rain, can appreciate its value over such musty, strawy stuff as too many call hay.

An idea prevails among many people that clover hay is necessarily of inferior value. This very false notion arises from the bad manner in which it is made and kept. Sometimes the leaves are all gone before it is cut. Sometimes, if it is cut in proper season, it is knocked about in alternate sunshine and shower till the heads and leaves are all gone, and nothing remains that can be gathered up but a mass of dry, tasteless stems; and sometimes it is put into the barn or stack with so much moisture and wet about it that it heats, and all its good-

ness is burnt up. Pull out a handful that was put up in this way, and you find the heads and leaves reduced to powder, and by a slight rubbing the whole flies off in dust.

Clover, if it stands up well, should be cut while it is in the fullest blossom; or, if it lodges down and begins to sour at the bottom, cut it as soon as this takes place. As soon as the dew or wet is dried off from it, put it into small cocks. Notice closely the progress it makes in drying; it will cure in from two to four days, or longer, according to the state of the weather. Put it into the barn or stack in a fair day, turning over the cocks and opening the bottoms a little a sufficient length of time before loading to dry off the dampness. Clover put up in this way will retain every leaf and head, together with that delightful fragrance which belongs only to such hay properly cured; and when it is fed judiciously, will be found to make as much flesh, milk, or butter, and of as good a quality, as any other hay, pound for pound.

A great loss is sustained in this part of the country from not sheltering animals. They are often fed in the bad manner I have described, exposed through the whole winter to all the vicissitudes of our changeable climate, without any better shelter than the lee-side of a rail fence. Under such exposure, they require much more food to sustain them than they would do were they kept comfortable, and with an abundance fed out, which is either consumed or wasted, they are "dog poor" in the spring.

All animals should have suitable and comfortable shelter. Milch cows should have dry and warm stalls, where each can be fed (without being molested,) as her peculiar condition requires. Horses and working oxen should also be provided for in a similar manner. Horses are generally pretty well taken care of here; but other stock is neglected. Young cattle may be in open sheds with roofs that will keep off the rains, and so arranged as to protect them from the winds. Under these sheds they may be fed in bad weather. Where barns and sheds *cannot* be had, a warm hill side, sheltered by a wood, is a good substitute. Stock of every description should, if practicable, be fed under shelter in stormy weather, and ought never to be allowed to go on to land when it is in such a state as to be cut up by their feet.

But it is objected that stock is so low here that it is not an object to provide suitable food and shelter for them. Stock is very low it must be confessed; and the necessity is so much the greater for keeping it in such a manner that the food consumed and the care bestowed may be turned to the best account.

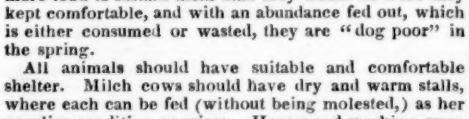
There is one description of animals, however, which it seems to me would, beyond a doubt, return a fair equivalent for some better treatment than they generally receive. At any rate, there can be no reasonable excuse for such inhuman neglect as they are condemned to suffer. I mean milch cows. In the neighborhood of all our large towns, butter commands a fair price; that is, a fair price in proportion to other articles. In this town, those who sell good butter find no difficulty in getting twelve and a half cents per pound through summer, and from that sum to eighteen and three-fourths cents in winter. Cheese also brings a price relatively higher than most farm products. Hence, where dairying is understood, it is reckoned a profitable business. Yet I have often passed by farms in the winter season, where quite large herds of cows and other cattle were kept, and found them ranging on the whole farm, treading up the soil, and gnawing the grass to the very roots, with only a pile of wheat straw to "run to," and nothing worthy the name of a shelter to protect them from the storm.

This part of the country possesses great advantages for keeping stock, particularly sheep; and if a proper system was pursued, *and a steady market could be had*, the want of which by the way is the greatest obstacle to improvement, the business might be made profitable.

Sheep injure grounds less by the tread than cattle; and by taking care to save the latter growth on some fields of blue-grass, or other grass that is not much injured by frost, they can live well through the winter almost entirely by grazing, requiring but little besides, except a small daily allowance of grain. But they should by all means have shelter from the storms. A good shelter may be made very cheaply with rails and straw. But they are here often allowed to run where they please, without being fed or sheltered, and by the month of March or April, half their wool is gone, and the remainder is so full of burrs that it is not worth much.

There are exceptions, to be sure, to such bad management; but I fear that a stranger would say of us—"this is country life in common."

Zanesville, O., Jan. 4, 1843. SANFORD HOWARD.



CORN STALK CUTTER.—(Fig. 17.)

MESSRS. GAYLORD & TUCKER—I send you a cut and description of a Corn-Stalk Cutter, which I think is superior to either of those given in your last volume, or any other I ever saw or heard of. It is what we call a "Corn Knife." It is made of iron laid with steel or all steel, if preferred. In the above cut, the distance from *c* to *d* should be 18 inches, which is the edge of the blade; from *a* to *b*, or the breadth 2 inches; thickness at back ⅛th of an inch, and should be gradually tapered to a thin edge. The shank *o* should be 6 inches long, and should be rather flattened on the sides than square or round or an oval shape; the handle *c* should be slipped on it and firmly clenched. Any blacksmith can make the blade, and any farmer the handle. Here in Kentucky, we plant our corn generally in hills about four feet distant in every direction, three and four stalks in a hill, and with this "Corn Knife," when kept sharp, a hand will cut and stand up in shocks or stooks, of 16 hills square to each stook, two acres per day, and when a picker up follows, four acres per day. One stroke to the hill is sufficient, nor that a hard one.

KENTUCK.

Sharpsburg, Dec. 1842.

VIRGINIA GRASSES.

TIMOTHY.—From the Blue Ridge westward, this grass is preferred to all others; but east of the Ridge it is inferior to several others. This difference of produce is no doubt principally caused by difference of climate, but the deficiency of lime in eastern Virginia, is another cause. It is generally cut only once in the year. Grows from 3 to 4½ feet high.

ORCHARD GRASS.—Where the land is rich, this grass thrives well over the state, and makes good hay if cut when in bloom. I am surprised those of the timothy region do not try this grass, as I am persuaded that the yield would be about double that of timothy, and the hay very nearly of equal quality. Red clover, and green grass, (Kentucky blue grass,) come to perfection about the same time as orchard, and one or both of these should always be sowed with the orchard, for the double purpose of filling up the interstices, and that the orchard may keep the others erect. The orchard grass is cut from two to three times the season. Grows from 3 to 4¼ feet high.

HERDS.—The herds grass, or red top, is very common east of the Blue Ridge, and is the only valuable grass which thrives on land which is naturally acid, or made so by stagnant water. It makes excellent hay, but the yield is not great, and is generally cut twice. Grows 2¼ to 3½ feet high.

GREEN GRASS, GREEN SWARD, GREEN SWORD, OR KENTUCKY BLUE GRASS.—On land which is really in good heart, and contains a goodly portion of potash, this, when taking into consideration both grazing and mowing, is undoubtedly the most valuable grass in Virginia. It will grow to about the height of two feet, and so very thick, that a blade, common width, cannot enter it. It makes good hay, and the grazing cannot be excelled. It may be cut for hay two or three times the season, then grazed through winter, and yet continue to grow during all mild weather. It is the blade which I would have it understood grows to the height of two feet in rich land, for in such it very seldom puts up a stem and yields seed; but when this does occur, this grass attains the height of three feet. Any land with us which would produce good wheat, will also produce good green grass, by the sowing of ashes or potash; and the sowing of the seed is not required, for the land is already stocked by nature. I have a lot of this grass mixed with clover, which has been cut twice for hay this year, and is now lying on the ground, the blades from ten to fifteen inches long. The stem of this grass has but few joints, and is straight and perpendicular. The color is pale green.

BLUE GRASS.—This grass grows to about the same height of green grass, with a thick jointed and zigzag stem. The color is dark green, tinged blue, and it never fails to produce seed. It grows only on acid clays, and mountain land, made acid by much decayed wood. It makes but indifferent hay, and I am always glad when by dint of licks I can extirpate it.

RED CLOVER, grows well with us, and is as well effected by plaster, as perhaps any where in the Union.

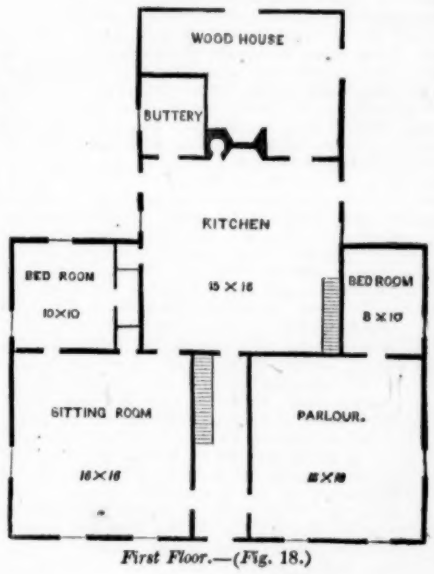
WHITE CLOVER.—This section of country is by nature well stocked with the seed of this grass, and the application of plaster or ashes, or both, will cause it to spring up and grow on any of our lands which are in heart, or has any heart at all. Pity it is, this grass is not more encouraged.

VELVET GRASS.—This grass has got amongst us by being imported with the orchard grass. The color is a pale green, tinged purple, with a purple head, and the whole plant is covered with down, resembling velvet, hence its name. The natural place for this grass is running water. I incline to believe its yield is greater than any other grass known amongst us. Within a few years past I have sowed some 30 or 40 acres with orchard grass, all of which had a mixture of the velvet, and I have noticed invariably that where a bunch of the last mentioned takes near to, or in running water, that it grows most luxuriantly. About five years past, I sowed a lot of 10 acres of ordinary clay bottom with orchard and velvet grass. It all came up well, and grew tolerably the first year; the second year the whole became sickly, and the orchard grass mostly died; and the third year the remains was velvet grass, and that in a dying state. The lower end of this lot was a poor sickly white clay, over which I conveyed a streamlet for improvement. In the running water, the velvet grass has taken firm possession, and is the best piece of grass I ever saw. This grass quickly perishes in stagnant water, consequently for a large meadow, a large quantity of water must be secured; and this must be kept in motion; therefore the meadow must have neither sinks nor absolute levels. Perhaps this grass possesses the power of absorbing and decomposing a large quantity of water, and if so, it must be very valuable, as poor land will suit it nearly, or perhaps quite as well, as that which is rich. This grass springs up as early as orchard grass, may be cut as often, and grows to very nearly the same height. The seeds resemble the orchard grass very much, but differ in this, that if not cut before thoroughly ripe, they will be lost by shattering.

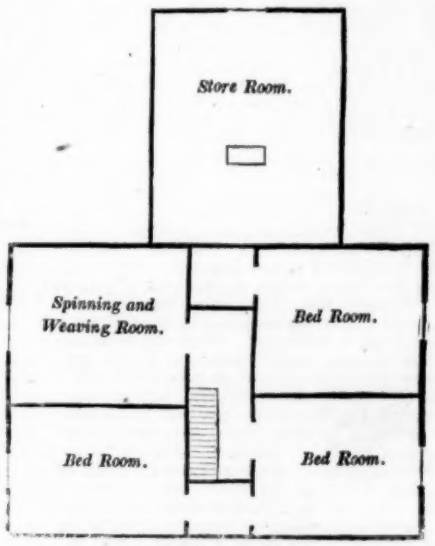
Thus it is seen, that for rich dry meadow, I would prefer a mixture of orchard grass, green grass, and red clover, or any two of them; for stagnant land, herds grass; and for running water, velvet grass.

Amherst co. Va., Dec. 24, 1842. ZA. DRUMMOND.

PLAN OF A FARM HOUSE.



First Floor.—(Fig. 18.)



Chamber Floor.—(Fig. 19.

MESSRS. GAYLORD & TUCKER—I transmit for your consideration the enclosed plan of a Farm House, which I think both convenient, and sufficiently large for any moderate farmer. It is intended to be only one story and a half, or 13½ feet posts, as that is high enough to admit of persons walking under the eaves, and makes the chambers quite pleasant. The rear to be 16 feet wide, and extended to suit one's fancy. I have not calculated a chimney in the front, as stoves are more handy and cheaper, the pipes to run up through the chamber floors and meet over the hall, where there is to be a chimney. There is a chimney in the kitchen, which affords a fire place, in that and the wood house; the latter to be used as a wash room if desired; a clothes press and two cupboards off from one of the bedrooms—one to be opened into the sitting room, and the other into the kitchen. Stairs to go up in the hall; cellar stair under, out of the kitchen. Kitchen stairs to go to one of the bedrooms, to save going up front stairs. The chamber hall to be lighted from bedroom, by means of glass in the upper part of door. A CONSTANT READER.

Michigan, Oct. 1842.

POTATOES—CUTTING OFF BLOSSOMS.

The following paragraph went the rounds of the agricultural papers last summer:—"M. Zeller, director of the agricultural society at Darmstadt, in 1839 planted two plats of ground with potatoes. When the plants had flowered, the blossoms were removed from them in one field, while those in the other field remained untouched. The former produced 476lbs. the latter only 371bs.—*Far*

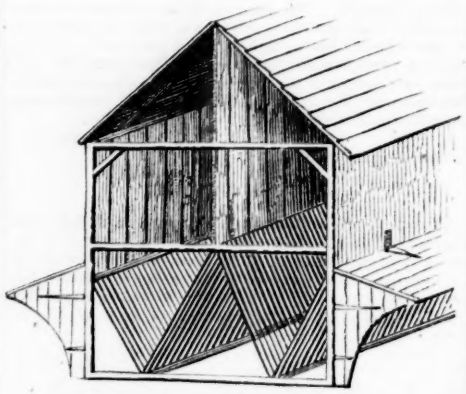
mer's Mag." I tried the experiment, supposing that plucking the blossoms might possibly have some favorable influence, but after measuring the results, no difference could be perceived. J. J. T.

HARD NAMES.

MESSRS. GAYLORD & TUCKER—Permit me to offer your readers some excuses for the use of *hard names*, by writers on agriculture, particularly writers on Agricultural Chemistry, Botany, Vegetable Physiology, &c. The fault seems to be not in the writers who use the terms, but in the readers who complain of them. Suppose a person who cannot read was to receive a letter from a friend; he goes to a neighbor, letter in hand, and commences abusing his friend, the correspondent, for addressing him in terms that he, the receiver, *cannot comprehend*. What would be thought of his complaint? Now this is precisely the case with those who complain of the hard names used in the various branches of science, and especially agricultural essays. The language of science is necessarily an universal language. Were it not so the writings of a Frenchman would not be understood by an Englishman, and so of all other nations—each nation would have its own sciences, from the benefits of which all the world besides would be excluded. Scientific terms, therefore, by general consent of all nations, are given in the Latin language, which is understood in all enlightened nations, and this uniformity of nomenclature is effected. Suppose a different state of things. Each nation uses a language of its own on all subjects in its writings. Nothing but a confusion of tongues equal to that of old Babel, would be the result. As familiar examples only look at the names applied in different parts of the country to some of our plants. TIMOTHY, for example, a very important grass to all of us, you will allow, is called *Herds' Grass* in New England, while Herds' Grass itself is quite a different sort of thing. Now suppose the *botanical* name of Timothy were used, hard as it is, would not the readers of all our public writings, better understand the subject? There being but *one* true name, all would soon understand it. Chemical terms are of the same character. No man can write an article that will be of the least use, without using what are called "hard names," simply because the science is comparatively new, new principles are discovered and new names for these principles must be used, and without the use of these names and terms, no one would understand what the writer said. Besides, a writer for the public cannot know to what section of the country in the world his writings may find their way—if he knew that his articles on the grasses would go to New England, and no where else, he might with some show of propriety say, "*Herds' Grass*;" or if it were confined to the middle and northern states, he might say "Timothy;" but as he cannot either know or suppose either, he will very properly say *Phleum pratense*, which every body can understand by referring to their books. When agricultural chemists are writing on the subject of manures or soils, they are equally obliged to use terms of fixed and certain meaning. Suppose they were to say *hearts horn*, instead of Ammonia, this would give a very indefinite idea of the thing intended. But if the say Ammonia, every body *may* know what was intended by referring to the books. When a chemist says putrefaction evolves certain gases, and by the addition of certain things, these gases may be fixed, and thus retained for the benefit of the soil, how can he express himself in a manner so that one who knows not even of the existence of such gases, can comprehend him? There are no *common names* or equivalent terms for any of these principles. Hydrogen gas for example has no common equivalent—no other word expresses the same sense. Carbonic acid gas has been called fixed air, but who would understand the meaning of fixed air better than they would that of the true term. No, gentlemen. Instead of complaining of hard names, let our farmers set to work and learn their meaning, or cause their sons and daughters to be taught them; this is the best remedy, and indeed the only one.

An illustration of the folly of adopting or using common names is given in the case of TIMOTHY. Here is another. The old and well known pest of the farmer, the *Oxeye Daisy*, is known by all the following names in Baltimore county, Maryland, viz: Caton's Pink, Carolina Pink, Jefferson Pink, Richardson's Pink, Maryland Aster, White Daisy, White Weed, Wild Camomile. The persons who know the weed by either of these names, do not know it by any of the others. The consequence is, when the persons who know it by the name of Caton's Pink, see an article treating of the best means of getting rid of the *Jefferson Pink*, they pass over it with the self congratulation that they are not plagued with that pest at least, whilst at the same time their fields are overrun with it completely. Now would it not be better for every body to call this weed by its proper botanical name, "hard" as it is, viz: *Chrysenthemum aucanthemum?* To conclude, however, with the question I intended to put to those who quarrel about hard names—suppose the school boy was to say to his teacher, "please sir, give me the words in English, Latin words are so hard," what would the teacher of the Latin school think? S.

P. S.—In my own family I was regularly in the habit of teaching my children the proper botanical names of every plant in the flower garden, of which I had a large collection. The children had no more difficulty in learning these "hard" names, than they would have had in acquiring the common ones, nor half so much, for there are numerous common names to all plants, but one proper name. All this they easily acquired before they knew a letter of the alphabet, and always used these hard names in their common talk with visitors and playmates.



SELF-FODDERING BARN..—(Fig. 20.)

MESSRS. GAYLORD & TUCKER—Mr. J. Horsfied has me fairly on the hip; my only surprise is, that my error has escaped notice so long; it occurred to me a day or two after the transmission of the plan, (p. 147.) I say it occurred to me, for I beg you to understand, that I was not so ignorant, as to suppose that a base of 3 feet of hay would not sustain a burthen of 12 feet width, and proportionate length. My limited experience even, had taught me, that hay had not the mobility of parts, with either gaseous or liquid matter. It was a strange oversight, yet am I in doubt, but that such errors, by exciting more critical observation, and more careful comparison of one's own notions, benefit as much as tolerable schemes wholly correct in their details and proposals. Excuse me for thinking, in the present instance, that an attempt to remedy the error, will be better than an entire renunciation of the plan. I propose the insertion (see fig. 20,) of each longitudinal sill into the transverse, 3 feet from the ends of the latter, (the said posts to stand as represented.) The racks should run from sills in a slant position, to girth under the swing roof. From same sills, (6 feet apart,) racks, rails, or slabs, should fall upon a beam, equi-distant from either sill, and seven or eight feet above them; thus forming a triangular vacant space in interior of barn, which would not be lost; since by hanging doors at either end, it would form a shelter for sheep, or calves, and they could there feed themselves through the racks. Furthermore, scantlings should run from the interior beam to ridge, in order that by mowing the hay on either side, none should rest upon the beam—thus defeating the design. By stripping the covering from one end, the interior is thus partially exposed. (Compare with fig. 86, p. 147, last vol.)

By this it will be seen that the *entire base* (if the cattle do their duty,) will be eaten away; and without a support the hay must settle; a *base* is *de facto* and *de jure*, a support, therefore the hay must settle, the cattle will live, and the tanner will be *hideless*.

Is the syllogism sound?

Salem, Ct. Jan. 14, 1842. D. G. M.

A PROFITABLE COW.

MESSRS. EDITORS—I send you some statements of the production of my cow for publication, hoping it may induce some to reform in the treatment of animals so useful and profitable. We made last spring in one month, from one cow, fifty-nine pounds of butter; commencing the fifth day of May, and ending the fourth of June. Within that time we weighed her milk for three successive days—the whole weight one hundred and eighty-nine pounds, averaging sixty-three pounds per day. Some five or six years ago, in the month of April, we made in twenty-one days thirty-nine pounds and six ounces, besides using milk freely for the family. We also made on another trial of nine months, two hundred and seventy-two pounds, besides using milk for a family of six persons. The cow was ten years old last spring, had a calf at two years old, and has had one every year since; is of the native breed, large size, always in good condition, and has been well kept from a calf, to which cause I attribute a portion of her superior qualities, and extra size; though there must be something "bred in the bone," that gives us yellow butter at all seasons of the year, and milk always nearly, and often quite the whole year. While on her trial last spring, she was fed six quarts of buck wheat bran per day, with what hay she would eat till grass took the place of hay.

Would not all farmers do well to keep fewer cows, and keep them better? is not one well cared for more productive than one poorly fed and attended? is not a warm stable better than the leeside of a rail fence? is not a good bed of clean straw better than one of manure, or can they be as comfortable with thirty or forty pounds of it adhering to their thighs, as if they were kept smooth and clean as in summer? In short, does not any thing that adds to their comfort, add to their production?

Such treatment may be objected to on account of expense, but has the objector counted the cost? Do turneps cost more than hay? Does bran, or oats, or corn even? I think not at this time. I see nothing extra, but a trifle of labor and care, and does not the superior condition of the animal pay for that more than four-fold.

Yours respectfully, DANIEL J. CURTIS.

Canaan Centre, Jan. 18, 1843.

COMMENTS ON THE CULTIVATOR FOR DEC.

GENTLEMEN—In answer to your Address "To the Patrons of the Cultivator, and to the friends of Agriculture in the United States," I will take the liberty to predict, that if all are as well pleased with your paper as Commentator has been, and only half as well instructed by it as himself, you will never want ample support; at least, so long as you continue to conduct it with the same good sense and sound judgment for which it has heretofore been distinguished.

In speaking of the animal called the Gopher, you have been misinformed. It is not "peculiar to the country west of the Mississippi," but abounds in Florida, and is common in many parts of Georgia.

The attack of your correspondent Mr. Wm. Partridge, upon Prof. Leibig, seems to resolve itself into a question of veracity, at least for those of your readers who like myself are no chemists. Thus, the latter asserts as a matter of fact, so notorious that it requires no proof, what the former pre-emptorily denies. But Mr. Partridge being fully aware that King Numbers is against him, resorts to the following expedient to destroy the force of this puzzling fact. He very courteously and most modestly compares all the followers of Professor Liebig, amounting probably to many thousands of the most learned men in Europe, to a flock of sheep, and Liebig himself to their Bell-Wether!!

Verily, Messrs. Editors, this correspondent of yours is a rare hand at an argument, whatever may be his chemical and other acquirements, of which I pretend not to judge. And Professor Liebig and Daubeny must take good care *what* and *how* they write, if such an intellectual drawcansir is to have the cutting up of their works.

I hail with pleasure, the return of our worthy friend Solon Robinson, to the pages of the Cultivator. His present communication is characterised by that same strong, sound, practical good sense which has distinguished all his writings. And for all who have determined to cut loose from their old homes in search of new ones, he will prove, as I confidently believe, an excellent guide, both in spirit and in truth.

Your good friend, Mr. S. E. Todd, has found out "nine plausible reasons for subscribing for the Cultivator." Permit me to add a tenth, which I deem something more than plausible. It has contributed greatly towards making zealous farmers, or rather farmeresses, (if I may coin a word,) and horticulturists of several highly estimable ladies, who have been induced thereby, to take much more than they ever did before of that out-door exercise, which is worth all the physic in the doctor's shops for strengthening delicate constitutions, and imparting health to both mind and body. This same service it would render to any others in similar situations, if the perusal of it operated on them in the same manner; and who then would say, that its real value could be estimated in dollars and cents.

The "Workingman's Cottage," by W. R. North, jun. is a very snug, comfortable looking building, and so have been several others of which you have given us drawings from time to time. But as well as I recollect, no estimate of the cost has ever been given in any of the descriptions which have accompanied the drawings. And yet no farmer should build even his house, without ascertaining beforehand, as near as practicable, what he will have to pay for it. This preliminary counting the cost of every thing, is absolutely essential to all agricultural thrift, and he who neglects it will be fortunate indeed, if he discovers his error before it be too late to apply the proper remedy.

I thank Mr. Morrell for reminding me of one of my remarks on a former communication of his, as it furnishes the opportunity to assure him that I did not misunderstand him. Indeed, I think that I now know "the cut of his jib," (to borrow a sailor's phrase,) sufficiently well never to mistake his object, which heretofore has always been a good one; and so I confidently believe it will continue, for men rarely change either their principles or their purposes, after reaching the age to which I suppose he has attained.

And now, Messrs. Editors, having finished my labors for 1842, as a volunteer reviewer of your paper during that period, I must beg leave to say a few words before I bid you farewell, both as to my past and future operations in regard to the Cultivator. If you yourselves and a majority of your readers have approved of what I have heretofore done, I shall feel myself amply rewarded for all the time that my comments have cost me. Nay, more, I shall be encouraged to continue them for 1843. But it is a fixed principle with me never to be intentionally obtrusive. I shall therefore be constantly on the watch for symptoms of disapprobation on the part of your readers; and you may rest perfectly assured that I can be silenced at any time, by a hint far less broad than a certain impudent fellow said he had once received, that his company was disagreeable to a family which he attempted to visit. Upon being asked what the hint was? he replied that it was nothing more than being kicked out of doors.

With earnest wishes for your success as Editors of the Cultivator, for your constant welfare as private individuals, I remain your old friend,

Dec. 31*st*, 1842. COMMENTATOR.

TO WESTERN EMIGRANTS.

Messrs. Eds. of the Cultivator—Everything connected with the subject of emigration to the west, has become interesting to a vast number of your eastern readers. Enquiries have become so numerous that I propose to answer publicly, the following questions, which, with a great many others have been made to me, and which I now select from a file of letters, a good deal bigger than "a piece of chalk."

I select promiscuously as they come up:

1st. "What is the price of land; can any be bought at government price?" The price of government land is $1,25, payable in specie or treasury notes, at the Land Office in the District where the land lies—a District is from 50 to 80 miles square. The purchaser receives a certificate of purchase, and afterwards obtains a patent from the President. In this section of the state, there is much prairie land now subject to entry, and some timber land, though the best timber is generally taken up, and is held from $2 to $10 an acre.

Many tracts of improved land can now be bought for less money than the cost of making the improvements; because men are in debt and cannot pay without selling their farms.

"Please give me some of the prices of stock?"

Cash prices are low: Horses, $40 to $90; six yr. old Oxen, $35 to $50; four yr. old, $25 to $35 a yoke; three yr. old Steers, $6 to $10, each; two yr. old, $5 to $7; one yr. old, $3 to $5; Calves, $1,25 to $2; Cows, $6 to $10; Sheep, common, $1,25 to $1,75; Hogs, Landpike variety, are so cheap that stealing them is no longer petit larceny; Hogs, Berkshire, and other improved breeds, "just as you can light of chaps," at prices to correspond with the present price of pork, which is from $1 to $1,75 pr. ewt.; Turkeys, 20c. each; Hens cannot be sold by the single one, for we are a centless people, and have no silver coin small enough to express the value.

"What is the price of a variety of farming implements?"

Never heard of anybody in this new world having a variety, unless he borrowed them. Can't answer that question. I guess they are about 50 pr. ct. dearer than at Albany—except Plows. Some excellent ones are made at Chicago and Michigan City, and other places in this region, nearly as cheap as at the east.

"Would it be advisable to bring household goods and kitchen utensils along with us?"

Yes, those that are actually necessary—that is if your route is mostly by water. But you had better bring a wagon, plow, harrow, cultivator, drill or wheel barrow, than a side-board, bureau, bedstead or chairs; but above all things, don't bring the piano; swap it off for a spinning-wheel. We are fond of music, but we want the right kind in the right place. In the winter, a string of sleigh bells, and in the summer, a dinner horn; and I have noticed that a piano in a farmer's house, always effects his daughter's lungs, so that she cannot call her father to dinner with that good old fashioned musical instrument.

Beds and bedding, and abundance of woolen clothing, iron-ware, a small lot of crockery, well packed, tinware, particularly the milk pans, as this is "a powerful" country for milk, and table furniture, and all the "small fixings" about a house, may be brought by the emigrant to advantage. Don't bring lumber, nor pay freight upon articles that you will not immediately want in your new house.

"Would it be desirable to bring grains for seed, and what kind?"

Yes. It is always desirable by way of change and for experiment in a new place. Bring a small lot of every thing that grows for the good of man; and if you don't want them yourself, give to your new neighbors; it will show a good trait of character, and they will repay you for your liberality, ten fold.

"Is it generally healthy?"

This is the most important of all questions. I answer that I do sincerely think the prairie country, generally, is a very healthy one; yet all new countries are subject to fever and ague, and portions of the west, particularly near large streams, have been severely afflicted.

Where I live myself, it is high rolling prairie, and groves, clayey soil, and pure well water, and is decidedly healthy. I believe that all similar situations are equally so.

"Can the dairy be made profitable?"

I will give the data for each one to answer this question according to his own notion of "cyphering."

The price of Cows, I have given. Cost of summer feed nothing but salt. The winter feed will be fully paid by the calf. The price of keeping being only $1,50. The prairie grass produces the best of milk, for butter and cheese. The average price of the former, I think, is about 7c. and the latter 4c. Upon this data, can the dairy business be made profitable, I think, is easily answered in the affirmative.

"What would be the expense of transportation of a horse team on the lakes, or traveling expense by land?"

The passage of a horse from Buffalo to Chicago, is the same as a cabin passenger. Last season, $18. The expense by land for a pair of horses with a moderate load, I think, will average three cents a mile.

"Is the land stony, if so, what kind of stone?"

No, not generally. There are scattered boulders of granite all over the prairies, and some parts of Illinois, for instance at Juliet, 40 miles west of this, the land is underlaid with limestone.

"What kind of wood is most prevalent?"

Oak of various kinds; next hickory. In some places beech, poplar, ash, walnut, sugar maple, &c. &c. abound.

"What is the price of a good farm wagon?" $60 to $100.

"Of harness?" Common double harness, without breeching, $16 to $20. The country is so generally level, breeching is but little used.

"Can good prairie lots be got, and wood handy?"

Yes. There is as good prairie as any man need ask for, now lying in sight of my window as I write, subject to entry at $1,25, and good oak timber within two miles, for $5 an acre.

"Are good common school teachers, in good demand, and at what price?"

Now, if the word "good" governs teachers, I can't tell. The article is seldom found in this market. If the word "common" governs teachers, I would answer that they are tolerably plenty, and common enough in all conscience. The price, $10 to $20 a month.

I think that the west is in need of an importation of *good* teachers of common schools. If they did not meet with good encouragement, it would show an uncommon degree of inattention to the best and only means of improving our condition as a civilized, moral people.

"Can I better my condition by removing to the west? I am blood and bone a farmer. Myself and wife are 43 years of age. We have two boys, 18 and 20; two girls, 14 and 16; two boys, 9 and 11, and two girls, 2 and 5; and we wish to settle where we can keep the family near together. I have a good horse team; good farming tools and dairy utensils, and some good stock, and but very little money?"

Yes; you are particularly well calculated to make a first rate "blood and bone" western emigrant. No matter if you have no money, you can rent land very low, and will soon be in a condition to let land instead of hiring it. I say come on, you and all that are under just such circumstances, particularly if those boys and girls are "blood and bone" farmer's sons and daughters.

"Where is "Lake C. H.?" as I cannot find it on any map."

It is to be found on Colton's map of Indiana. It is the county seat of Lake county, Indiana, the North Western county of the State, and embraces the head of Lake Michigan.

"I suppose the prairies are generally level and the land inclined to wet. Of course the streams are sluggish?"

I suppose no such thing, and of course you are greatly mistaken in each and all of your suppositions. The land is generally gently undulating; sometimes hilly and not inclined to wet, and the streams afford an abundance of excellent mill sites.

"Have you any stone coal?"

Not in this part of the State. The nearest is on the Illinois river, 50 or 60 miles west.

"What kind of people, that is where from, is your section of country settled with?"

Mostly from the eastern states; some Canadians; a good many of the best class of Germans, and a few English and Irish.

"What is the condition of the country as to morals and religion?"

Well, now that's a poser. You forget that it is contrary to the generally received opinion at the east, that either exist at the west. I will allow that some of us are no better than we should be, for we have taken the benefit of the Bankrupt act, and cheated our eastern creditors a little, but we shall pay up, *(when Clay is elected President)* and we do sometimes send you a little spring wheat mixed with winter wheat; but we imagine that you don't know the difference, and ought to be thankful that we don't mix buckwheat. But we always pay our debts, (public ones excepted,) when we can't help it, and we don't get trusted, where we've no credit. Upon the whole, we are a moral people, and if we are not a religious one, it is not because we don't pretend to be.

"Does your country abound in fish and game?"

I am sorry to say it does; because where it is abundant there is always a class of inhabitants that are too lazy to work, who perform twice as much labor in treeing a coon in a hollow stump, or following a tad pole through a swamp, under the idea of catching a fish, as they would in earning a good living off the land, instead of letting their families suffer for food, while they are eternally "out hunting."

In all my hunting and fishing, the greatest game I ever caught was the fever and ague, which if I had kept on dry ground, would never made game of me.

If you ask the question, with an idea of coming here to follow it as a business, I beg you will stay away.

For occasional recreation, I have no objection, and the opportunity for that is good here. Deer, geese, ducks, prairie hens (grouse) and some other kinds are abundant; fish of the best quality, and some very large size, abound in lakes and streams.

Now, here comes a questioner that I am tempted to introduce in his own language. He writes from Delaware:

"********* I therefore want to know something of your section of country, and the west generally. I wish to move to the west if I could be satisfied that I could make a living for myself and family, easier than I can here, or with a better prospect for the future. Hereabouts, the "skinning system" has been going on so long, that our farms are pretty much in the same situation you say in your traveling memorandum, that the land is near Washington City—to improve it, would cost more than it would come to, and although we manage by skinning the land, to keep our own skins full, it is not so with our stock, for in the spring they often bear a close resemblance to some of Kit Cornhill's wooly breed of horses. Now, can a poor man, in the prime of life, with a healthy wife and children, all inured to labor, *make a living* in your country, and where would be the best place for him to settle?"**

I think I have already answered the first part of this question, but I repeat that he can more than "make a living." There is an Irishman in my neighborhood, who last year an abundance of vegetables, and much more raised wheat than he needed for his family, almost entirely with the spade. The "best place to settle" for a poor man, is in any good healthy neighborhood of prairie farms—plenty of such locations in North Indiana and Illinois.

"How many bushels of corn, wheat, oats, &c., can two hands and two horses make in a season, doing other necessary work on the farm?"

That's more than I can tell—don't think the experiment was ever tried in this or any other country where the means of subsistence are so easily procured; particularly when the natural indolence of mankind predominates over the artificial habit of industry. Let every man answer for himself, how much he *can* raise in a rich, loose, mellow soil. Let no man say how much he *will* do.

"What is the average price of grain?"

That question is more feasible. I think in the Chicago market, for the last two or three years, the following is a fair average:—Wheat 60c., Corn 21c., Oats 19c., Timothy seed 1.50., Flaxseed 87½c., White beans 56c., Peas 62½c., Barley 37½c., Potatoes 12½c., Onions 37½c.

"Is your land clay, sand, or black loam?"

Each and all in different places, sometimes on the same farm. The latter is the most prevalent.

"I wish you to state the advantages and disadvantages of your country?"

I have already stated many of the advantages and perhaps shall some more, as other questions arise. One of the disadvantages you may see in a late communication of mine, of a settler who froze to death while crossing a large prairie on a trip to mill. You will also find many other disadvantages that emigrants have to encounter in settling a new country, detailed in my former articles of advice to emigrants.

But the greatest disadvantage of all, is the extreme fertility of the soil. And if you have energy of character enough to overcome this, you will overcome all others, and find more advantages than disadvantages. But don't forget, that in all countries, the ease of procuring subsistence is apt to beget indolence. This is the great and almost only danger in the west.

"What is the wages of farm laborers and carpenters?"

Average $10 a month; 50c. a day. Carpenters $1 a day.

"Is it necessary to clear up your wood land of under growth for pasture?"

In some groves when the country is first settled, there is little or no under growth; but by keeping out the fires, it soon springs up very thick, so that it would be necessary to grub out the under growth. Generally speaking, however, the growth of timber should be constantly and carefully promoted, and then in fifty years there would be more timber in the prairie region than now.

"Is your county well watered?" "Can you get wells easy?"

Yes, to both questions. Where I live, wells are from 15 to 60 feet. The first 5 easily spaded, then a very hard compact bed of clay to within 10 or 12 feet of the bottom, then fine beach sand. Stock water is obtained in creeks, ponds and springs; but as the country becomes thickly settled, a great many farms will have to form basins in the clay after the manner much practiced in Kentucky, or obtain stock water from wells. The water in wells is pure, that is, clear, and very durable. It is generally what is termed *hard*.

Throughout nearly all the prairie region, good water is easily obtained by digging; 90 feet is the greatest depth I know of.

"Which is the best time of year to emigrate?"

If your route lies by way of the lakes, start from the eastern states in May, June, July, August or September, not later. You should arrive at your destination before November, at all events. May and June, are undoubtedly the best months for traveling. In moving, emigrants often suffer great exposure, which they notice but little at the time, but which sows the seeds of fever and ague, which comes upon them in their new home, and makes them discontented with the country, and sometimes drives them back whence they came, when a little more care, prudence and foresight, would have saved a world of misery.

At whatever period you move, be careful of the health of your family. Above all things keep your temper, and you will be likely to keep your health. Don't be in too much of a hurry, and be sure to get ready before you start. That is "the best time to emigrate."

"If I should purchase an entire new tract, what would be the probable expense of a comfortable dwelling and barn, and other preparations for cultivating."

The first breaking up of the prairie is generally counted in the cost of preparation; that is $1.50 an acre; rails, one cent each; count 16 or 18 to every rod, and calculate the expense of any sized lot you wish. A comfortable log cabin with two rooms, can be built for $50. A frame house 1½ stories high, 20 by 30 feet, from $250 to $300. A log barn, 18 by 40, $40. Of course there are several other items of expense that I cannot give exactly here, such as a well, cellar, garden fence, yards, sheds, &c. &c. that cost labor and not money.

And just so with this article. It will only cost you the

labor of reading it, and if it does you no good, you have the satisfaction that it did not cost you much money.

And now I again have the pleasure of subscribing myself your old acquaintance and agricultural friend.

Lake C. H. Ia. Dec. 9, 1842. SOLON ROBINSON.

SHEEP HUSBANDRY.

MESSRS. EDITORS—I notice that one of your readers has proposed several questions to me in the Cultivator for the present month, (page 198,) in reference to Paular Merino Sheep, &c.

Allow me to say that Inquirer is right, in the *identity* of the individual of whom he makes his inquiries. And although principally engaged in the duties of my profession, it will afford me great pleasure to add a humble item of information in reference to that truly valuable animal, the sheep. I reply the more readily to *him*, from the fact that I have received within the last two months, many similar inquiries of *individuals* from different parts of the Union.

His first inquiry is in reference to my treatment of my flock generally?

Answer.—I have sheds for my sheep for winter, with a southern or eastern exposure; low and roomy—boarded on three sides *only;* as I regard it important that the animals have pure air; while it is protected from storms. I have placed under my sheds a layer of earth from 4 to 6 inches in thickness, to elevate the bed of the animal, so as to keep it dry and to absorb the urine; a great part of which would otherwise be lost. This layer, by spring, becomes an excellent manure.

This preparation being made, I put my buck lambs in one lot, ewe lambs in another, breeding ewes in another, &c. I put my buck with the ewes the first of December, let him run with them about 12 out of each 24 hours, until about the first of January, when I take him from them entirely. I tag my sheep about the first of April; wash in clean, running water; shear about the 20th of June, which I consider sufficiently early for this climate; I have known flocks materially injured by the *cruel* practice of early shearing.

I separate my lambs from their parent ewes, about the 20th of August; which I consider beneficial to both.

The second inquiry, is in reference to feed.

My sheep have had during winter, for the last two years, (when they gave 5¼ lbs. of wool per head, as stated in the Cultivator for October,) as much hay, of rather an ordinary quality, as they would eat, and 2 quarts of corn daily, measured with exactness, each 32 sheep, which you will notice is half a gill to each sheep, daily; also, twice a week, a mess of roots, potatoes or turneps, which I regard important for the health of sheep; especially when the ground is covered with snow for a length of time. We feed hay in boxes, and grain in troughs. Commence feeding the ewes some ten days before putting the buck with them, as we regard it very important that they be in a *thriving condition* at that time. In summer, our sheep are kept in a lot by themselves, and their feed is what most good farmers would call, too short. We salt in troughs, and design to keep plenty by them both summer and winter.

Such has been the feed of my sheep heretofore; but I am making some experiments the present winter, with different kinds of feed; the results of which I shall be happy to communicate to the readers of the Cultivator.

The next inquiry is, as to the "comparative profits of the Paular and other varieties of fine wooled sheep, which I have formerly kept."

I am sorry to say I have no data by which I can tell *exactly* in this particular. Your readers can judge in some measure, for themselves, when I shall have made a brief statement.

Some 16 years since, my health became such, as to render it imperious to suspend my labors as a minister, and seek for a time, other employment. About that time, I purchased a flock of 150 merino sheep, such as were *then* common in Vermont, though they were considered rather a superior flock. They and their increase, gave me an average of 3 to 3¼ lbs. of wool per head; until I purchased an imported Saxony buck at an expense of about $100, and subsequently some ewes of the same blood. By this means, the quality of my wool was improved a little; but I soon found that I had a smaller, and much less hardy animal, and a fleece not exceeding 2¼ to 2½ lbs.; notwithstanding I fed quite as well then as now. My loss in sheep during the winter, and lambs in the spring, was very considerable, notwithstanding all my care and efforts.

I finally recovered my health, sold my flock, &c., and returned to my profession; and it is since I purchased my farm in this place, (which I did, for the benefit of an only son, whom I desired to make a *practical* farmer; and who has almost the entire care of our little flock,) that, with a view of placing upon our farm the kind of stock, which would yield the greatest nett profit, I purchased, as stated in the Cultivator for October, the foundation for my present flock of Paular merinos. These are an exceedingly hardy race—large carcass for merino—thick, long wool, and so fine, that the difference between the value per pound, and such wool as I got from my former flock, when they did not average over 2½ lbs. will not exceed from 3 to 5 cents. It is equal to the wool of my first flock, before the introduction of Saxony. The ewes are uniformly good milkers; rarely lose a lamb; and we have not lost but one sheep, except by accident, since commencing with our present flock. It will thus be seen that the Paulars are *much more* profitable, not only in the value of fleece, which is *as much* at least, as 5 to 3, compared with my former flock; but in the proportion of lambs raised, and the comparative loss in sheep by disease.

The last inquiry is, as to the effects of crossing them with other varieties. I am happy to be able to state with the utmost confidence, *uniformly good.*

My brother-in-law Hull, of Wallingsford, Vt., has been selling bucks of this variety for many years; and the more the effects of a cross with these bucks are seen, the more eagerly are they sought; and the uniform testimony of those to whom I have sold bucks, is, that the increase from these bucks, give from 1 to 1½ lbs. more wool than their original stock, with the same keep. With the Saxony, they add greatly to the symmetry of form, weight of carcass, strength of constitution, and weight of fleece; while the quality of wool is but very little injured.

With the coarser varieties, the cross is beneficial in every respect except weight of carcass, with very little dimunition even in that.

Having answered Inquirer, allow me, Messrs. Editors, to say, that the yearling bucks on hand when I wrote you in September, were all sold before the 1st of Nov., that I sent four per canal and lakes to Milwaukie, W. T. purchased by a gentleman who came to examine them at your suggestion; and have the happiness to learn from him, that they arrived in fine condition, and were much admired. I have had a number of applications for bucks which I could not supply.

With sincere desires for your success in the work in which you are engaged, I am, yours,

R. A. AVERY.

Galway, Saratoga Co. N. Y., December 29, 1842.

Domestic Economy.

CURING BACON IN VIRGINIA.

THE following description of the method of curing hams in Virginia, is from a letter from Dr. D. W. BRODNAX, Greenville co., Va., to the Editors of the Cultivator:—"The day after slaughtering, the hog is placed on a bench of suitable width and height, and his head removed; he is then split on each side of the chine, or back bone, so that the chine is left separate from either side; the fleak is then removed, then six or seven of the first ribs, so as to leave but little meat attached besides the intercostal muscles, (these pieces are called "*spare ribs*;") the shoulder piece is then cut nearly square, having no rib attached, some of the muscle being taken from it for sausage meat. The ham is then cut in nearly an oval form, when there are made from each side, three principal pieces, shoulders, middlings, and hams. These pieces are then removed to another table, scrubbed well, first on the skin and then on the flesh side, with salt, a desert spoonful of salt petre being added to each ham and shoulder. They are then packed along the sides of the house, and salt sprinkled over them, to remain here from 4 to 6 weeks, according to the size the of hogs, when they are hung up and smoked every day till they are of a brown color. In the summer they are (or should be,) well rubbed with unbleached hickory ashes, and then packed away in the same kind of ashes, so that no two pieces shall touch each other. The ashes are not lost, for they can be applied to the land when the bacon has been used. Bacon thus prepared will keep two or three years."

MANUFACTURE OF MAPLE SUGAR.

MESSRS. GAYLORD AND TUCKER—You and some of your correspondents, seem to set a high value upon maple sugar, but I am confident none too high for its real worth. I have had much experience in its manufacture, while a youth, and residing with my father and older brother, in your state. They have made, for a number of seasons, as many as 12 and 1500 pounds. I know *well* how it is *generally* made, and I beg leave, through the columns of your paper, to suggest to its present makers, who follow the common mode, three or four improvements, practiced, I believe, by very few indeed:

1. The strictest attention should be paid to cleanliness, in gathering, storing, and boiling the sap; and to this end, (*besides* the usual skimmings while boiling, and straining of the syrup before "sugaring off,") the sap itself, should by all means, be well strained before putting it into the boilers.

2. It should *not* be boiled in common kettles, generally used for that purpose. Their sides, as generally used, become highly heated, while the sap is often rising and falling in the kettle, owing to the unsteadiness of the fire; and when it falls, the sap, scum, &c. adhering to the inside of the kettle burns on, and when the sap rises again, it is melted off, and thus blackens, embitters, and defiles the whole mass in a greater or less degree. To remedy this, if common potash, or smaller iron kettles, must be used, they should be set in an arch of brick, or in one more cheaply constructed of common stone, which any person can lay up, even without the assistance of a mason: and in setting them they should be placed high in the arch, so that the fire will only come at the bottom and a *very small* portion of the sides, and then care should be taken never to let the sap or syrup get so low in the kettles as the top of the arch. This will prevent its burning upon the sides, and being washed off again. Every person can make *this* improvement; and when tried, it will be found a great and a cheap one. It is far better, however, not to use the common kettle at all; best to have a sheet iron vat made with a flat bottom and upright sides, and only 10 or 12 inches deep. Let this be placed upon the top of the arch, so that the fire can reach the bottom only. The evaporation will be far more rapid, and the desired object more certainly attained. The size of the vat should of course depend upon the amount of business to be done; and while it should be only about three feet wide, it may be 10 or 12 feet long. This great length, in proportion to its width, will save fuel; as a fire in the mouth of the arch will heat its whole length.

3. When the syrup is strained and put into the kettle for "sugaring off," there should be added for each pail full, about one pint of milk.

4. The sugar should *not* be run into cakes, but when sufficiently boiled to "grain," let the kettle be set off the fire, and when it begins to cool, the stirring should be commenced with a stick flattened for that purpose. This stirring should be increased in rapidity with its cooling, and toward the last of it, *two men* should relieve each other for a few minutes—stirring it very rapidly, and to the bottom, until it is all perfectly dry and "alive," as the phrase is. This "stirring off," can be finished in about twenty minutes; and when thus "done," cane sugar can never equal it in beauty or flavor.

The kind of kettle here recommended, and this "stirring off" of maple sugar, I *know* by experience, are improvements upon the common method of making it. Why are they not equally applicable to the making of *corn* sugar? I hope they will be *tried* by those who try the latter. ROEDALE.

P. S. Every farmer should have a few maple trees upon his place, in situations, if possible, where they will not shade too much his own, or his neighbor's arable land. This can generally be obtained by placing them along the *south* side of some road or lane. A few trees will afford more sugar than families generally use, and also a very pleasant and agreeable employment for young people, at a time when little else can be done.

USEFUL RECIPES.

MESSRS. EDITORS—Not having seen the following recipes in the Cultivator, I send them; as they are used in this part of the country, perhaps they would be beneficial to some of your numerous readers:

TO MAKE BRILLIANT PAINT WITHOUT OIL OR LEAD.—Take clean lumps of well burnt lime, about six quarts, slack the same in hot water. After the lime has become well slacked, add one pound whiting, one pound sugar, three pints rice flour made into a jelly, and one pound of clean glue dissolved. Have over the fire five gallons of water, into which put five quarts rock salt. The same should be dissolved entirely, by boiling and skimming clean. Pour a sufficient quantity of this upon the lime and other ingredients, to make it the proper thickness to spread well with a paint brush. If made entirely free from lumps, it will look nearly as well as oil paint.

ANOTHER.—To make a paint for roofs of buildings which will render them fire proof, slack your lime as before directed, and the same quantity, then add to the same one pound alum, half pound copperas, and three and a quarter pounds potash; the last to be added gradually. Then add four quarts fine sand or hard wood ashes, and coloring matter, to suit the fancy. Its look will be better than paint, and be nearly as lasting as slate, and *fire proof.* It must be put on hot. It should be made the proper consistency by adding the salt water, as above directed. Old shingles must be first cleaned with a stiff broom, when this composition may be applied. It will stop leaks, prevent moss from growing, and render them incombustible, and last many years.

Clinton Mich. 1842. A READER.

TO STOP BLEEDING.

MESSRS. EDITORS—A few years ago, a valuable carriage horse of mine, took suddenly ill on a journey. A professed farrier in the village in which I was compelled to stop, advised bleeding in the mouth, which was done accordingly. But unfortunately, after the animal had bled more than a gallon, it was found impossible to stop the blood. We all thought the horse would certainly bleed himself to death. At this crisis, a farmer happened to pass by, and directed an application of the *fresh excrement of the swine.* A small portion of this was immediately held on the wound made by the farrier's instrument, and in *two minutes the blood was completely stopped.* I have tried this simple though not very pleasant remedy, several times since, in similar cases, and with the same remarkable success.

Boonsboro', Md. Dec. 20, 1842. J. H. YOUNG.

MAKING VINEGAR.

MESSRS. EDITORS—S. E. T. inquires in your last No. how to make vinegar, and you inform him, and your way is doubtless a very good one; but I can tell him how to make first rate vinegar, with very little trouble:—Take a cask of any size, I prefer a large one, fill it about one-fourth to one-half full, and never to exceed that; place it in the open air, or in the chamber, or cellar. If the *air* can pass over it, fermentation will soon cease; it will lose its spirit, or deaden as some express it, and be first rate vinegar. *Never let your cask be more than half full.* I never knew good vinegar made in a full cask. As you draw out, fill up with cider, and you may always have a supply. Never bung up the cask. I make a practice of cleaning my casks of mother occasionally,

and never would I add any to the vinegar. Vinegar makes mother, but mother *does not make vinegar*.

A CONSTANT READER.

RESPECTED FRIENDS—I can give S. E. T. a receipt for making Vinegar, that is infallible. To every barrel of cider, add one and a half gallons of good whiskey; it will give it strength and body, and the change will speedily be wrought. R. T. BENTLEY.

Sandy Spring, Md. 12th mo. 17th, 1842.

CEMENT FOR GLASS.—The best decidedly that I have tried is common white-lead paint. It is applied to the broken edges, and they are then tied closely together and remain a month or two, when they are found to have firmly adhered. J. J. T.

The Garden and the Orchard.

THE PEAR TREE.

J. ODELL, Esq. of New-York, in a recent letter to us says,—"I lately purchased half an acre of ground near this city, on which was a fine Virgalieu Pear tree.—This, you may well suppose, I prised very highly. It blossomed freely and made a full show of fruit. As soon as they made a little size, they became rusty, cracked open, and every one had a worm in the fruit, which was small and nurly. The attack of the worm I am aware is no uncommon thing, and others in the neighborhood who had trees once bearing fair fruit complain of this black, rusty, cracking, open appearance, the fruit all falling prematurely and worth nothing. The premature falling is of course produced by the worm, but the black rusty appearance with the cracking open is certainly a new thing in the neighborhood which is on Long Island, near the city, and near the water. If, gentlemen, you can throw any light on this subject that the evil may be remedied, you will confer a favor on one of yonr subscribers certainly, and perhaps on others."

Our correspondent is right in supposing that the premature falling of the fruit of the pear-tree, is owing to the worm. This is the larvae of the pear weevil, *Curculio Pyri*, which attacks the blossom buds, depositing its eggs in them, causing the young fruit to turn dark and fall off when the insect has attained its perfect state, but while the fruit is immature. They sometimes prove friends to the pear-tree by reducing the too great quantities of fruit which in some years loads the tree. If they become numerous they may be destroyed in the same manner as the plain curculio, by placing cloths under the tree early in the spring, while the insect is at work, and shaking or jarring them from the branches.

As to the blight or dark color and defective state of the fruit, two or three causes may be assigned. The first is the attack of a parasytic mould or fungus on the fruit which injures the vitality of the part affected, checks its growth, causes it to crack open, and renders the fruit more or less worthless according to its prevalence. It is a common disease of apples in the colder sections of our country, and to one variety of this disease, is the bitter rot which so much injures some varieties of the apple owing. Another cause, or perhaps only another form of the preceding, is the occurrence of unseasonable frosts after the fruit is developed, not sufficiently severe to destroy it, but to injure its vitality on the most exposed parts, thus stopping the growth of one part without affecting that of the other. The fruit changes its color, and the injured part cracks open. Another cause is thus stated by McIntosh in his work on the Orchard and Fruit Garden: "Root pruning is sometimes necessary when the roots penetrate into a wet, cold, or otherwise uncongenial subsoil, and also when the roots penetrate too deeply even into a good or over rich soil. In the former case are produced canker, cracking of the bark, and skin of the fruit, which latter also become stony or gritty, shedding the fruit at the season of the seeds forming; and in the latter the forming of strong watery shoots, which grow until late, and do not ripen their wood properly in autumn."

Where this is the case, the roots may be shortened and health be restored to the fruit and the tree. As in the present instance the blight or cracked appearance has not been observed before; it is probably owing to atmospheric causes, or the agency of temperature, and therefore not liable to occur again. A very large portion of the apples in some parts of our country suffered last year from a similar cause, being dark colored on one side, cracked and nurly. A knowledge of the character of the subsoil, would determine whether this cause or the one given by Mr. McIntosh, was most probable. In a late number of the Gardener's Chronicle, Prof. Lindley, in reply to an inquiry as to the cause of a similar injury to fruit, gave as the cause a succession of showers, with an increased temperature, after a dry season, which had checked and blighted the fruit.

PEACH TREES.

It is well known that in a large part of the state of New-York, including chiefly the central portion, the cultivation of the peach is scarcely ever attempted, from the frequent or general destruction of the crop by frost. It is believed that in many places this difficulty would be prevented, if instead of planting the trees in low and sheltered situations, elevated and exposed ground be selected. Several facts strongly confirm this opinion. Some years ago, the writer budded a large number of peach trees situated in a valley, and although they were very healthy and vigorous, and the best buds only were selected, more than nine-tenths of the buds were destroyed by winter. Two or three years' repetition of the experiment produced the same result. In other trees, forty rods distant, and the ground from thirty-five to sixty feet higher, treated in successive years in the same way, not one bud in ten was killed. This great difference was owing without doubt to the greater warmth of the low situation, urging a more rapid and succulent growth, and preventing the proper hardening of the wood in autumn—hence the top branches were generally also destroyed. But opposite influences operating on the elevated ground, the growth of the wood was not so rapid, and it became well hardened before cold weather. The increased severity of frosts in the valley, tended greatly to increase the difference.

Thus also when bearing trees are planted in low places, the blossom buds are urged forward by the warmth of day, and the increased severity of night frosts destroys them. But on hills, these extremes of heat and cold do not occur; hence they generally escape. One of the early settlers of Wayne county, near Palmyra, twenty-four years ago planted a peach orchard on a hill nearly one hundred feet above the average height of land; and during twenty years since they first began to bear, he has lost only one crop by frost, while in ordinary situations one crop in four or five is destroyed.

When the soil on hills is unfavorable, it should be properly improved, or large holes be dug and filled with suitable materials. Cold, wet, or spongy soils, should be avoided.

There are of course exceptions to these rules, but as a general guide, wherever frosts are more severe in valleys than on hills, the latter will be found far better suited to the culture of the peach, and the crop be far more certain. J. J. T.

CATERPILLARS ON APPLE TREES.

MESSRS. GAYLORD & TUCKER—In this vicinity, the past season, the caterpillars have been very numerous and destructive on our apple trees. Owing to the dry and favorable weather about the time of their spinning, we shall have enough next year, if let alone, not only to eat all our leaves from the trees, but to take possession of our houses for a cocoonery; as they walk in without knocking, some trouble will be necessary to keep such numbers out. The number of eggs for the next year's crop, exceed all calculation. They are deposited about the 1st of July. The other day I found ten clusters of eggs on two small branches of one tree; each would have furnished worms enough for a good sized nest. They commence eating as soon as creeping, and spoil the shape of many fine leaves before their nests are visible. I am quite sure there would be a saving, to have these clusters of eggs all off and destroyed, thus preventing any damage. It is quicker done when found, but not so easily found as the nests; but they can be found, most of them, without specs, especially after the leaves are off. The farmer could hardly devote a few leisure hours to better purpose. He has six or eight months to do it, and is hardly excusable to let any nests appear; and if a few do appear, can he be excused unless they immediately disappear? I had a curiosity to know whether the perfect insect was a butterfly or miller; but no one could tell me. I have ascertained. On the 8th of June, I enclosed in a glass case, several caterpillars of full size, that were traveling in search of a place to spin their cocoons; the next day, two or three commenced winding. (Did any one ever reel these cocoons to test the quality of silk?) In twenty-two days, out came the perfect insect, an inch or more in length, three-eighths in diameter, wings close to the sides of the body, color reddish brown; lived but a short time, and moved only in the night. Their eggs may be found in clusters of hundreds, near the end of the limb, well glued on, covering it nearly round, three-quarters in length; the end of each one touches the bark; light colored, sixteenth of an inch in length, diameter less than a pin, shell very hard, and packed close. Over the whole is a thick coating of a dark shining substance, apparently water proof. Here they remain till spring. The warm weather that brings out the leaves, hatches the eggs also; the worms take up their line of march towards the trunk, until a branch puts off; there they make their nests, and are ready to devour as it comes out, all the foliage.

Corsaclie, Sept. 6, 1842. M. QUINBY.

BLACK RUST ON PLUM TREES, &c.

MESSRS. EDITORS—I differ from your correspondent P., in the manner of exterminating the "Black Rust," which infests Plum Trees. His direction, (if I understand right,) is to "cut the limb off." The method which I practice is, to shave the excrescence close to the wood, being particular to scrape out every particle of the watery substance, and cover the wound with wax, and it will soon heal over. In this manner the limbs can all be saved and the health of the tree preserved.

THE PEACH TREE.—I have tried an experiment in manuring the Peach tree with the light and friable substance that collects under the floors of barns and other buildings. The trees on which the experiment was made, were standing in the same soil, and of equal thrift. The quantity applied was a bushel to each tree, and the effect is quite apparent. The trees which had this dressing, sent out large and vigorous shoots, while those without, the limbs were smaller and of a more yellow cast. This substance contains a considerable quantity of saltpetre, an article necessary in the cultivation of the Peach. Yours truly,

LAWRENCE SMITH.

Middlefield, Mass. Aug. 8th, 1842.

MANURING THE VINE.

MESSRS. GAYLORD & TUCKER—It appears that many facts, considered as new discoveries by the moderns, were well known and practiced by the ancients. When I read in Liebig, "that the best manure for vines, was the leaves and cuttings, cut into small pieces and buried at their roots," I considered it a modern discovery, and was not undeceived until my daughter pointed out to me a proof of a similar application being directed by Mago, the Carthaginian, who wrote about two thousand three hundred years ago. I will quote from Liebig and Mago, that your readers may judge how much has been lost to the world by the dark ignorance of past ages.

"On the manuring of the soil in vineyards," (Liebig, p. 347,) "I cannot omit the opportunity of again calling the public attention to the fact that nothing more is necessary for the manure of the vineyard, than the branches which are cut from the vines themselves.

"My vineyard has been manured in this way for eight years, without receiving any other kind of manure, and yet more beautiful and richly laden vines could scarcely be pointed out. I formerly followed the method usually practiced in this district, and was obliged in consequence to purchase manure to a large amount. This is now entirely saved, and my land is in excellent condition."

"These branches were used as manure long since in the Bergstrasse. M. Frauenfelder says—

"I remember that twenty years ago, a man called Peter Muler, had a vineyard here which he manured with the branches pruned from the vines, and continued this practice for thirty years. His way of applying them was to hoe them into the soil after having cut them into small pieces.

"His vineyard was always in a thriving condition; so much so indeed, that the peasants here speak of it to this day, wondering that old Muler had so good a vineyard, and yet used no manure."

Democritus and Mago praise a north aspect for the vine; because they believe it bears most in this situation. But in goodness it will not surpass others.

"In the planting of vines, let the sides of the trenches be lined with small stones. For these, says Mago, keep out the wet in winter, and in the summer the moist and damp from the roots. This writer is of opinion, that the *pressed out grapes*, mixed with dung, strengthens the seed laid in the earth, because it draws new roots; but this in wet and cold weather warms at the proper time, and in summer nourishes the young vines, *and makes them fruitful*. If, however, the soil in which the vine is set be poor, then must rich earth be found and put in the trenches."

"For the pruning of the vine, once every two years suits very well. The best time, however, as Mago says, is the spring, before the shoots become long, because, being still full of sap, they may be easiest and most evenly cut, and they do not oppose the sickle.

"Mago, the Carthaginian, adds also to the rule for setting the vine: that the seed being planted, the trench should not be immediately filled up, but half of it left to the following year; by which, he says, the roots of the plant are forced to strike downwards."

WM. PARTRIDGE.

New-York, Jan. 10th, 1843.

PEACH WORM—TAR—A neighbor informs me that the application of hot tar to the roots of peach trees, effectually excludes the worm. The earth is removed for a few inches down, and the tar applied. It is not intended of course to *destroy* the worm, but to prevent its entrance in trees yet unaffected. J. J. T.

INQUIRY.—I have in my front yard a young tree of the common black mulberry covered every year with catskin, but no fruit. I have grafted and budded from fruiting trees, without succeeding in the operation. Will one of your horticultural friends point out a way to change it so as to produce fruit? J. JONES.

INCREASE IN THE WEIGHT OF CATTLE.

THERE are some farmers inclined to doubt the entire correctness of the inferences we have drawn, from the weight of the animals now sold at the Smithfield markets in London, and the Brighton in this country, that the weight of animals had nearly doubled within the last fifty years, but we think there can be little doubt of the fact. Mr. Norton, of Berwick, Mass. has furnished Mr. Colman the weights of some fat cattle killed in that place in 1790, and also some of cattle killed in 1841. We condense the results.

1790.

Hatch Ox,	Total weight,	361½ lbs
Perkins Ox,	"	811
Hussey Cow,	"	321
Emery's Oxen, 508—459		967

1841.

C. N. Cogswell's Cow,	772
C. N. Cogswell's yearling Heifer,	563
C. N. Cogswell's 2 years old Heifer, live weight,	1174

Such instances as these, might be multiplied to any extent; and they prove conclusively the benefits of careful breeding, and the existence of an improved husbandry.

Veterinary Department.

DISEASES OF SWINE.

EDS. CULTIVATOR—I wish to enquire of some of your correspondents, through the medium of the Cultivator, relative to a complaint with which my hogs are afflicted, hoping thereby to gain some information which may be beneficial in the future treatment of hogs similarly afflicted, if I should ever be so unfortunate as to have others thus diseased.

Some six weeks since, one of my fatting hogs—a *barrow*—died. I discovered that it was ailing about eight and forty hours previous to its death. It appeared to be considerably swollen the whole length of its urinary passage, and hinder parts, accompanied with a weakness in its loins. Nothing passed it as I could discover from the time it was observed to be ailing; and died in the greatest apparent agony that I ever saw a dumb beast. Its great effort appeared to be to void its water. Upon opening it, a whiteish jelly like substance was found upon both sides and the whole length of the urinary passage; the flesh much inflamed, and apparently blood-shot.

About three weeks since I killed my fatting hogs. Four of them—*barrows*—of the same litter with the one which had previously died, as above described; the remainder being of another litter. Three, out of the four, upon dressing them, we found to be diseased, similar in all respects, as to place and appearance with each other, and similar to the one which died; though in a much less degree. The diseased part was located about two inches above the orifice of the urinary passage, and upon the left side thereof. It appeared to occupy a place about the size of a dollar, of a yellow cast, and filled with hard kernels about the size, and very much resembling kernels of corn. I had not discovered that these hogs were ailing. They fattened well. Whether it was the incipient stage of a similar disease with which the one died, and would ultimately have caused their death, of course it is impossible for me say. These facts alone would not have made me very iniqusitive upon the subject, though I thought them rather singular at the time, were it not for the further facts that I now have nineteen pigs about four months old—ten *boars* and nine sows—and about ten days since I discovered that all the *boars* were more or less diseased in their urinary passage. They cannot freely void their water. It appears to collect near the orifice of the urinary passage, and causes a swelling about the size of a hen's egg, which, if but gently pressed the water will spirt out at the natural opening without difficulty. The opening does not appear to be closed. The pigs eat well, and do well. The complaint is exclusively confined to the *males*. They are of the Berkshire breed, and all, the one which died, and those which I killed, and the pigs I now have, are the pigs of the same boar. I have enquired of my oldest neighbors and farmers, and all say they never have seen or heard of any thing of the kind before. If you, or any of your correspondents, can give any light upon the subject, I should be much gratified to see it in the Cultivator. It will then not only enlighten me but others who may have hogs thus diseased. And as the Cultivator has now become the farmer's text book, and book of reference, whatever is known upon the subject above mentioned should have a place upon its pages. D. B. C.

Canaan, Jan. 2, 1843.

TO CASTRATE SWINE.

MESSRS. EDITORS—Let a hand catch him by the hind legs, throw him on his left side, put his foot on his neck, and pulling his legs forward, press them to his belly; then placing your right foot on his tail, grasp the testicle firmly in your left hand, and make an incision quite through to, and nearly the whole length of it, when it will pop out. Then taking hold of the naked testicle and raising it up, run your knife through the membrane, (which extends from one end of the testicle to the other,) near the string or fore end of it, and cut out to the end next you. Then with your knife, scrape the string down and cut it off, leaving 3 or 4 inches of the string attached to the testicle, then let your pig loose, without tying, greasing, tarring or any thing else. If the operation is performed skilfully, according to these directions, there is not the least danger, and the animal minds it so little, that unless you were to see the wound or blood on his legs, you would scarcely know that any thing had happened. I do not think that the practice recommended by "Richmond," in the Dec. No., is sound, unless in the case of old animals. It is remarked by surgeons, that the wound which bleeds most profusely, (unless so much as to entirely prostrate the system,) is less liable to prove fatal and more easily healed. And I suppose the reason to be simply this: the evacuation by the wound lessens the circulation, in the parts especially, and in the system generally, thereby reducing it and rendering it less liable to inflame. Now, if as advised by "Richmond," a ligature is applied to the artery, scarcely an ounce of blood would escape from the animal by the operation. In my opinion, the ligature never should be applied unless where there is danger of bleeding to death, and in swine this danger never does exist, if the operation is skilfully performed. I have castrated swine by hundreds, from five days to five years old, and never in a single instance, applied the ligature, nor to my knowledge, lost a single case, except it were ruptured before. As to the practice of applying salt and ashes to the fresh wound, (a custom of "Richmond's" neighbors, which he so justly denounces,) it is not only useless, but injurious and outrageous, and the man who is guilty of such conduct, deserves, I was going to say, the like treatment. KENTUCK.

RELIEF OF CHOKED CATTLE.

MESSRS. EDITORS—In looking over the articles of your January No. I learned a novel method of relieving choked cattle; one too that may prove fatal in the hands of some one less fortunate or skilful than your correspondent. It is not, I believe, known among farmers that an ox or cow may be relieved in one minute from the danger of death and anguish of pain produced by a potatoe or any other body lodged in the œsophagus or passage to the stomach, by an operation so simple that any boy in his teens may perform it, without the least danger to the patient. Take a common carriage whip, the butt or handle end of which is an inch or an inch and a quarter in diameter, and smooth; let an assistant raise the head of the beast to be operated on, so high that the lower jaw will be parallel with the lower part of the neck; thrust the butt into the mouth and push forward boldly but steadily, till you have pushed the potatoe or substance into the stomach. I feed my cows potatoes without cutting, as I have no fears of their being injured by choking, the remedy in that event being so simple. I have performed it several times, and would advise your correspondent, Mr. Otis, to try it, should ever an occasion require it, before he tries the more dangerous one of tapping; and he will be convinced that his remedy is neither "surest, most expeditious," or "safest." H. D. E.

Port Byron, Jan. 20, 1843.

SPAYING.—We have received from L. BISHOP, Esq. of Symth county, Va. the following account of the process adopted in spaying pigs by Rufus Rouse in that neighborhood. It differs in some respect from the directions given in the January No. (1842,) of the Cultivator:—

"Fix a plank three feet high. Lay the pig upon the right side on the plank, with two persons to hold the fore and hind legs, and mouth. The implements used are a sharp pocket knife and a long crooked needle, with cutting awl-blade edges, and a strong waxed thread. The operator takes his knife and shaves off some of the hair 3¼ inches from the hip bone; he then makes an incision crosswise, so that he can introduce one finger to bring out the uterus; he then cuts off the whole of the uterus and throws it away; he then enters the needle on one side of the wound and brings it up through the other, and secures it with a strong knot. One stich is sufficient. A mixture of tar and hogs' lard is used to smear the wound. This mode of operating is the invention of Capt. Rouse, and I am in favor of the plan; considering it more safe and less troublesome than the former methods."

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AGENTS FOR THE CULTIVATOR,

IN THE PRINCIPAL CITIES.

Boston—Eben. Wight, Druggist, 46 Milk st.
Hovey & Co. Seedsmen, 7 Merchant's Row
Providence—A. H. Stilwell, Bookseller
Hartford—E. W. Bull, Druggist.
New-Haven—George Sherman.
New-York—Dayton & Newman, Booksellers, 199 Broadway.
Utica—Wm. Bristol, Druggist.
Rochester—Samuel Hamilton, 8 Buffalo st.
Lansingburgh, N. Y.—A. Walsh, gratuitous.
Philadelphia—Judah Dobson, Bookseller.
D. M. Landreth & Co. Seedsmen.
Pittsburgh—R. G. Berford, 85 Fourth st.
Lancaster, Pa.—J. Gish.
Baltimore—Dr. G. B. Smith.
Washington City—F. Taylor, Bookseller.
J. F. Callan, Seedsman.
Richmond—R. Hill Jr. & Co.
Alexandria, D. C.—Bell & Entwistle.
Charleston—D. M. Landreth, Seedsman.
St. Louis—E. P. Pettes.
Augusta, Geo.—Wm. Haines, Jr.
Nashville—A. Fall.
Jas. A. Creighton & Co. Periodical Agents
Louisville—James George, Ag. Warehouse, 4th st.
Montreal, L. C.—Benj. Brewster.
Toronto, U. C.—Eastwood & Skinner, Booksellers.
Halifax, N. S.—C. H. Belcher, Bookseller.
St. Andrews, N. B.—G. F. Campbell, Esq. P. M.
St. Johns, N. B.—T. H. Wentworth, Esq. P. M.

☞ ADVERTISEMENTS on subjects of interest to the farmer and gardner, will be inserted in the Cultivator at the rate of $2.00 for 100 words, for a single insertion.

PITT'S THRESHING MACHINE.

THE subscriber has left Albany, and located at Rochester, N. Y., where he will continue the manufacture of his machines for Threshing and Cleaning Crain. All letters for him, should be addressed to Rochester, N. Y.

Rochester, Dec. 26, 1842. JOHN A. PITTS.

SITUATION WANTED.

AN English Farmer, who understands his business well, and who has been seven years with one of the best farmers of this state, will be disengaged on the first of April, when he wishes to obtain a situation for himself and wife, who is well qualified to take charge of a Butter Dairy. Good references will be given. A letter post-paid addressed to JAMES KEAN, Albany, will be promptly answered. *Jan.* 25, 1843.

THE WORKINGMAN'S MISCELLANY,

AN occasional publication of Addresses, Lectures, Biography, and compendiuous works on the useful arts and sciences. This is emphatically an age of cheap literature, and it is only to be regretted that so little of the useful is mingled with the flood that pours from the press. It is proposed to remedy this deficiency by publishing in a cheap, but neat form—after the manner of the English edition of Griffin's Scientific Miscellany—such Lectures, Addresses, &c. &c., as may be deemed of value and interest. These, it is proposed to issue occasionally, under the above title, so as to be sent by mail at periodical postage. The first of the series, a Lecture on *The condition and true interests of the Laboring Classes*, by E. G. Squier, in a neat pamphlet of 16 large double column octavo pages, with printed cover, is now ready, and for sale at the office of the Mechanic in this city. Price 6 cents, 20 copies sent by mail to any part of the state for $1, post paid. The next in the series will be 3 Lectures to the Laboring Classes, by the late Wm. E. Channing, to be followed by others from the pen of Everett, &c., of all of which, together with the prices, due notice will be given.

☞ All orders accompanied by the cash, addressed, post paid, to the publishers of the Mechanic, Albany, or to the publishers of the N. York Tribune, N. York, will be punctually attended to Liberal deductions to agents.

POUDRETTE AS A MANURE,

MAY be had, a superior article, in barrels of four bushels each. This manure has been used extensively on Long Island, in New Jersey, Connecticut, and other states, for several years past, and has been found an excellent fertilizer. A barrel, four bushels, is considered equal in fertilizing properties, to sixty bushels of yard manure, and is peculiarly convenient for garden purposes, as there are no foul seeds in it. Present price, $5, for three barrels, or $15, for ten barrels. Orders containing the cash, will be promptly attended to, if addressed to D. K. MINOR, Agent,

Jan. 25. 3t. 118 Nassau st. New-York.

☞ Shares in the company may be had at $110, which will entitle the holder to one hundred bushels a year, for 16 years.

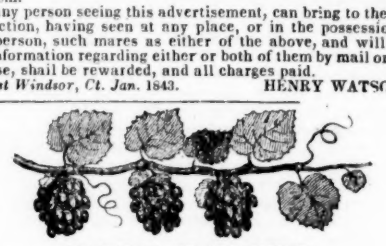
STRAYED

FROM the pasture of the subscriber, on the evening of the 31st day of August last, one blood bay mare, with star on the forehead, and a small scar on her right arm, just above her elbow. She is about 15 hands high, and straddles with her hind legs when she trots.

Also, one lighter bay mare colt, one year old last spring, with large star on her forehead, and one white hind foot. They passed Hartford Bridge, and were seen on the old Hartford and Farmington road, about three miles east of Farmington, on the afternoon of the 1st of September, which is the last I have heard of them.

If any person seeing this advertisement, can bring to their recollection, having seen at any place, or in the possession of any person, such mares as either of the above, and will give me information regarding either or both of them by mail or otherwise, shall be rewarded, and all charges paid.

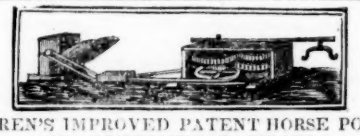
East Windsor, Ct. Jan. 1843. HENRY WATSON



ISABELLA GRAPE VINES,

OF proper age for forming vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the vineyards at Croton Point, are now offered to the public. Those who may purchase, will receive such instructions as will enable them to cultivate the grape with entire success. (provided their locality is not too far north.) All communications, post paid, addressed to R. T. UNDERHILL, M. D., 400 Broadway, N. Y., will receive attention. He feels quite confident that he has so far ameliorated the character and habits of the grape vines in his vineyards and nurseries, by improved cultivation, pruning, &c that they will generally ripen well and produce good fruit, when planted in most of the northern, all the western, middle and southern states.

New-York, Jan. 25, 1842. 2t.



WARREN'S IMPROVED PATENT HORSE POWER AND THRESHING MACHINES.

THE undersigned would respectfully call the attention of Farmers and Agriculturists, and dealers in Agricultural Implements, to these machines. The readers of the Cultivator the past year, must have extensively noticed the satisfactory recommendation *as to their superiority for general use, taken in connexion with their simplicity and low price.*

Having therefore had a full and fair test during the past season, as to the *efficiency* of these machines, and their *adaptation* to the wants of farmers generally, as well as their *suitableness in price* with the "times," the undersigned are encouraged and warranted in extending their arrangements, so as to introduce them extensively throughout the Union. It will be recollected, the price for these machines, is for a two Horse Power and Thresher, only $75; and for a one Horse Power and Thresher, only $60. Terms, cash on delivery.

Knowing that money is scarce in many parts of the country, with those who need these machines, and who would be glad to procure them, the undersigned feel desirous to meet this necessity; and will therefore suggest that they are willing to receive consignments of produce, when the parties cannot pay cash.

The undersigned would also now give notice, that they are prepared to act as agents for the sale of all kinds of approved Agricultural Implements.

L. BOSTWICK,
J. PLANT,

New-York, Feb. 1, 1843. 88 Water st